Course : PGDCL-03

Vardhaman Mahaveer Open University, Kota

E – Commerce

Course Development Committee **PGDCL-03**

Chairman

Prof. L. R. Gurjar

Director (Academic)

Vardhaman Mahaveer Open University, Kota

Convener and Members

Convener

Dr. Yogesh Sharma, Asso. Professor
Department of Law
Vardhaman Mahaveer Open University, Kota

Prof. H.B. Nanadwana
Director, SOCE
Vardhaman Mahaveer Open University, Kota

External Members:

1. Prof. Satish C. Shastri
Dean, Faculty of law, MITS, Laxmangarh
Sikar, and Ex. Dean,
University of Rajasthan, Jaipur (Raj.)

2. Prof. V.K. Sharma
Deptt.of Law
J.N.Vyas University, Jodhpur

3. Dr. M.L. Pitaliya
Ex. Dean, MDS University, Ajmer
Principal, Govt. P.G.College, Chittorgarh (Raj.)

4. Prof. (Dr.) Shefali Yadav
Professor & Dean - Law
Dr. Shakuntala Misra National
Rehabilitation University, Lucknow

5. Dr Yogendra Srivastava, Asso. Prof.
School of Law,
Jagran Lakecity University, Bhopal

Editing and Course Writing

Editor:
Dr. Yogesh Sharma
Convener, Department of Law
Vardhaman Mahaveer Open University, Kota

Course Writer:
Dr Kusum Dixit
Principal & HOD, School of Law
AISECT University, Bhopal

Academic and Administrative Management

Prof. Vinay Kumar Pathak
Vice-Chancellor
Vardhaman Mahaveer Open University, Kota

Prof. L.R. Gurjar
Director (Academic)
Vardhaman Mahaveer Open University, Kota

Prof. Karan Singh
Director (MP&D)
Vardhaman Mahaveer Open University, Kota

Prof. H.B. Nanadwana
Director, SOCE
Vardhaman Mahaveer Open University, Kota

Course Material Production

Prof. Karan Singh

Director (MP&D)

Vardhaman Mahaveer Open University, Kota

Production 2015 ISBN-978-81-8496-578-0

Vardhaman Mahaveer Open University, Kota

PGDCL -03 E- Commerce

Unit No.	Unit Name	
Unit-1	Introduction to E-Commerce (Meaning, Evolution, and Type etc.)	4
Unit-2	Online Contracts and Privities of Contract	19
Unit-3	Jurisdiction Issues of E-Commerce	34
Unit-4	UNCITRAL: Model Law of E-Commerce	49
Unit-5	Electronic Data Interchange	65
Unit-6	Digital Signatures	79
Unit-7	Electronic Money and E-Transactions	95
Unit-8	Tax Issues: Global Perspectives	109
Unit-9	Tax Issues: Indian Perspectives	126
Unit-10	Double Taxation	145
Unit-11	Indian Legal Position on E-Commerce	159
Unit-12	Role of International Agencies in E- Commerce	174
Unit-13	Credit Card and Internet	1191
Unit-14	E-Banking and E-Banking Frauds	207
Unit-15	Tax Evasion Through E- Commerce	224
Unit-16	OECD initiatives in International Taxation	236
Unit-17	Benefits of E- Commerce	254
Unit-18	Consumer Protection in Cyber Space	266-282

UNIT-1

INTRODUCTION TO E-COMMERCE

Objective:

After going through this unit, you should be able to understand:

- Meaning and nature of e-commerce
- Development of e-commerce at international and national level
- Various Types of e-commerce
- Scope of e-commerce
- Impact of e-commerce in business and governance

Structure:

1.1 Introduction
1.2 Meaning of e-commerce
1.3 Various applications of E-commerce
1.4 Features of E-commerce Technology
1.5 Types of e-commerce
1.6 Impact of e-commerce
1.7 Summary
1.8 Self-Assessment Test
1.9 Suggested Readings

1.1 Introduction

E-commerce is buying and selling goods and services over the Internet or doing business online. Commerce is part of e-business as specified in Unit-I. E-business is a structure that includes not only those transactions that center on buying and selling goods and services to generate revenue, but also those transactions that support revenue generation. These activities include generating demand for goods and services, offering sales support and customer service, or facilitating communications between business partners. Electronic commerce or e-

commerce refers to a wide range of online business activities for products and services. It also pertains to "any form of business transaction in which the parties interact electronically rather than by physical exchanges or direct physical contact."

1.2 Meaning of E-commerce

E-commerce is the use of electronic communications and digital information processing technology in business transactions to create, transform, and redefine relationships for value creation between or among organizations, and between organizations and individuals.

E-commerce has been simply defined as conducting business on-line. The Organization for Economic Cooperation and Development (OECD) defines electronic commerce as a new way of conducting business, qualifying it as business occurring over networks which use non-proprietary protocols that are established through an open standard setting process such as the Internet. This definition distinguishes it from the earlier Electronic Data Interchange (EDI) type proprietary based networks or Intranets that were not based on an open (and, therefore, not cost effective information infrastructure) like the Internet. In the WTO Work Programme on Electronic Commerce, it is understood to mean the production, distribution, marketing, sale or delivery of goods and services by electronic means. A commercial transaction can be divided into three main stages: the advertising and searching stage, the ordering and payment stage and the delivery stage. Any or all of these may be carried out electronically and may, therefore, be covered by the concept of 'electronic commerce'. Broadly defined, electronic commerce encompasses all kinds of commercial transactions that are concluded over an electronic medium or network, essentially, the Internet. E-commerce covers three main types of transactions, i.e. business-to-consumer (B2C), business-to-business (B2B), and business-to-government (B2G).

Ecommerce has allowed firms to establish a market presence, or to enhance an existing market position, by providing a cheaper and more efficient distribution chain for their products or services. One example of a firm that has successfully used ecommerce is Target. This mass retailer not only has physical stores, but also has an online store where the customer can buy everything from clothes to coffee

makers to action figures. It is about using the power of digital information to understand the needs and preference of each customer and each partner to customize products and services for them, and then to deliver the products and services as quickly as possible. Personalized, automated services offer businesses the potential to increase revenues, lower costs, and establish and strengthen customer and partner relationships.

To achieve these benefits many companies engage in electronic commerce for direct marketing, selling, customer service, online banking and billing, secure distribution of information, value chain trading and corporate purchasing. An e-commerce strategy helps deliver a technology platform, a portal for online service, and a professional expertise that companies can leverage to adopt new ways of doing business. Platforms are the foundation of any computer system. An e-commerce platform is foundation of technologies and products that enable and support electronic commerce. With it, business can develop low cost, high-value commerce systems that are easy to grow as business grows.

1.3Various application of E-commerce

Businesses communicate with customers and partners through channels. The internet is one of the newest and best business communications channels. It is fast, reasonably reliable, inexpensive, and universally accessible. It reaches virtually every business and more than 200 million consumers. Electronic commerce, being a new field, is just developing its theoretical or scientific foundations. It has several applications. The major applications of E-commerce are as follow:

1. **Direct marketing selling and service**- Today more Web sites focus on direct marketing, selling and service than on any other type of electronic commerce. Direct selling was the earliest type of e-commerce, and has proven to be stepping-stone to more complex commerce operations for many companies. Successes such as Amazon.com, Flipkart, Dell computer, and the introduction e-ticket by major airlines, have catalyzed the growth of this segment, proving the reach and customer acceptance of the internet.
2. **Financial and Information Service**- A broad range of Financial and Information Service are performed over the internet today, and sites that offer them are enjoying rapid growth. These sites are popular because they help consumers,

businesses of all sizes, and financial institutions distribute some of their most important information over the internet with greater convenience and richness than is available using other channels. For example, online banking, online billing, secure information distribution.

3. **Maintenance, Repair and Operation**- The internet also offers tremendous time and cost savings for corporate purchasing of low-cost, high-volume goods for maintenance, repair and operations activities. Typical goods include office supplies, office equipment and furniture, computers, and replacements parts. The internet can transform corporate purchasing from a labor and paperwork–intensive process into a self-service application. Company employees can order equipment on Web site, company officials can automatically enforce purchase approval and policies through automated business rules, and suppliers can keep their catalog information centralized and up-to-date. Purchase order application can then use the internet to transfer the order to suppliers. In response, suppliers can ship the requested goods and invoice the company over the internet. In addition to reduce administrative costs, internet-based corporate purchasing can improve order-tracking accuracy, better enforce purchasing policies, provide better customer and supplier service, reduce inventories, and give companies more power in negotiating exclusive or volume discount contracts. In other words, the internet and e-commerce have changed the way enterprises serve customers and compete with each other, and have heightened awareness for competing supply chains. No other business model highlights the needs for tight integration across suppliers, manufacturers, and distributors quite like the value chain. Delays in inventory tracking and management can ripple from the cash register all the way back to raw material production, creating inventory shortages at any stage of the value chain. The resulting out of stock events can mean lost business. The internet promises to increase business efficiency by reducing reporting delays and increasing reporting accuracy. Speed is clearly the business imperative for the value chain.
4. A retailer can save his existence by linking his business with the on-line distribution. By doing so, they can make available much additional information about various things to the consumers, meet electronic orders and be in touch with the consumers all the time. Therefore, E-Commerce is a good opportunity. In the world of e-commerce the existence of the wholesalers is at the greatest risk because the producer can easily ignore them and sell their goods to the retailers

and the consumers. In such a situation those wholesalers can take advantage of e-commerce who are capable of establishing contractors with reputed producers and linking their business with the on- line.

5. **Marketing-**Many issues of marketing offline are relevant to online E-Commerce - for example, cost benefits of advel1isements and advertisement strategies. Other issues are unique to E-Commerce, ranging from online marketing strategy to interactive kiosks.
6. **Computer sciences -** Many of the issues in the infrastructure of E-commerce, such as languages, multimedia, and networks, fall into the discipline of computer sciences. Intelligent agents play a major role in E-Commerce as well.
7. **Consumer behavior and Psychology -** Consumer behavior is the key to the success of B2C trade, but so is the behavior of the sellers. The relationship between cultures and consumer attitude in electronic market is an example of a research issue in the field.
8. **Finance -** The financial markets and banks are one of the major participants in e-commerce. Also, financing arrangements are part of many online transactions. Issues such as using the Internet as a substitute for a stock exchange and fraud in online stock transactions are a sample of the many topics of the field.
9. **Economics –** E-commerce is influenced by economic forces and has a major impact on world and country economies. Also, theories of micro and macro-economic need to be considered in E-Commerce planning, as well as the economic impacts of E-Commerce on firms.
10. **Management Information Systems (MIS) -** The information systems department is usually responsible for the deployment of e-commerce. This discipline covers issues ranging from systems analysis to system integration, not to mention planning, implementation, security, and payment systems, among others.
11. **Business Law and Ethics -** Legal and ethical issues are extremely important in e-commerce, especially in a global market. A large number of legislative bills are pending, and many ethical issues are interrelated with legal ones, such as privacy and intellectual property.
12. **Others -** Several other disciplines are involved in various aspects of E-Commerce to a lesser extent- for example, linguistics (translation in international trades), robotics and sensory systems, operations research / management science, statistics,

and public policy and administration. Also, e-commerce is of Interest to engineering, health care, communication, and entertainment publishing.

For developing countries like India, e-commerce offers considerable opportunity. E-commerce in India is still in growing stage, but even the most-pessimistic projections indicate a boom. It is believed that low cost of personal computers, a growing installed base for Internet use, and an increasingly competitive Internet Service Provider (ISP) market will help fuel e-commerce growth in Asia's second most populous nation. The first e-commerce site in India was rediff.com. It was one of the most trafficked portals for both Indian and non-residents Indians. It provided a wealth of Indian-related business news a reach engine, e-commerce and web solution services. The past 5 years have seen a rise in the number of companies enabling e-commerce technologies and the internet in India. Major Indian portal sites have also shifted towards e-commerce instead of depending on advertising revenues. The web communities built around these portal sites with content have been effectively targeted to sell everything from event and mouse tickets the grocery and computers. In spite of RBI regulation low internet usage e-commerce sites have popped up everywhere hawking things like groceries, bakery items, gifts, books, audio and video cassettes, computer etc.

1.4 Features of E-commerce Technology

Electronic Commerce means better business communication and data interchange information is essential for every business. The quality and quantity of information which a business delivers to customers or use this information to make decisions can determine just how competitive the business is.

A company already may be using a number of electronic based tools to help acquire and extend information and communication needs. These may include personal computers, word processors, courier, facsimile machines, telex services, cellular phones, pagers and more. Unfortunately, many of today's communication tools are not really up to the speed of today's business needs, and can actually create barriers to achieving the goals set on the basis of strategies formulated by a company.

For instance, postal facilities can keep business waiting for information for days or even weeks. Overnight couriers may save time but can be an expensive

proportion. Traditional telex and fax is quick but costly and communicating by telephone can become an endless game of tag.

Now a business can avoid these problems by using e-commerce which is fast, cost efficient, time saying and easy to use economic tangibility and good business generation.

Electronic business can result in better transactions, wide market coverage by offering the benefits of speed, convenience, being cost effective, timeliness, high profit margins, instant customer relations, no loss of customers, impact and control- all are a fraction of the past traditional business methods. A concern can do everything it can to run its business efficiently and profitably.

Application of electronic operations to commercial activities means better business solutions. It greatly facilitates a firm to make better decisions, sale forecasts, prices and other valuable information can be sent and received instantaneously. A business will always have the information it needs faster, easier and more completely in the new system of communication than ever before.

This enables firms to have an edge over competitors by informing, following up and requesting information faster and easier to customers. Another feature is that it helps to maintain greater control, at work, home or while traveling, communicate with any business partner or firm, anywhere instantly.

1.5 Types of e-commerce

Based on the type of relationship between different sides of commerce, e-commerce can be categorized in different types.

a. Business to Business E-commerce (B2B)

E-commerce is the process of conducting business on the Internet. Its scope includes not only buying and selling but also services, fulfilling the needs of customers and collaborating with business partners.

Business to business e-commerce is smart business. The opportunity for business to business e-commerce is even greater.

A wholesaler may sell products to the retailer. There are advanced e-commerce software which support multi-tier pricing. This helps to set up online stores to offer preferred pricing to some vendors and shared price to others.

This includes internet-enabled initiatives of an enterprise to form commercial linkages with another enterprise, dealer, warehouse or manufacturer. In this form of e-commerce, e paperwork and time-to-market get vastly reduced. Throughout the world, this e-commerce mode is the biggest.

In a B2B transaction, the interaction is between businesses. For example, a website that is catching for the steel industry might have facility for buyers and sellers to list their requirements and post their products. It helps them in quickly closing the transactions and the buyer can get quality, material and can choose from different suppliers.

B2B commerce is a growing business in the e-commerce arena- with the increasing use of the internet, more and more business are realizing the commercial advantage of giving business clients a streamlined and easy manner to order products or service online. It facilitates access to the ordering process to only those with whom a concern has a commercial relationship.

Business to Business e-commerce provides small and medium enterprises (SMES) with an excellent opportunity to access new markets improve customer service and reduce costs. And while hurdles exist, they should be viewed more as speed breakers rather than road barriers. As a medium of information storage and dissemination, the internet has and is emerging a clear winner. Its rate of penetration has far outpaced the growth of other popular media such as newspaper, radio and television.

B2B transactions are however relatively high value in nature and organizations are slow to change their traditional systems for the supply chain management. The reasons for the growth in B2B e-commerce are many. In an increasing competitive scenario, e-commerce offers highly attractive cost saving options. The shift to this process is often driven by the needs of buyers.

B2B e-commerce is expected to be the largest mode of transacting e-business and is a global phenomenon. It involves taking internet enabled initiatives to form commercial links with other enterprises, dealers or manufacturers. In this form of e-commerce, a business firm places orders for supplies with another business firms directly over the Internet. Paperwork and time required for processing the order and delivery of the goods are thus reduced to a great extent.

b. Business to Consumers E-commerce (B2C)

It is for the customers to buy stores from the web. The problem to be recognized in this is to secure payment, using encryption, transaction integrity, quick response, time and reliability.

B2C e-commerce involves selling of goods and services to consumers or end users. It allows them to browse the product catalogue, select products or services and complete the order online.

In a B2C transaction, the interaction is between a consumer and the preferred business. For example, the most popular site is amazon.com, which is the first online bookseller which has proved a potential competitor to the traditional bricks and mortar booksellers such as Barrens and Noble.

In this category of e-commerce, businesses use the internet to offer to consumers sales and services around the world 24 hours a day, seven days a week and 365 days a year, the sites Amazon, Rediff and Uphar are among those belonging to this category. These websites are meant for selling goods directly to consumers through the internet. The two-way accessibility of the internet enables operating companies to directly ascertain customer preference and buying trends. Businesses are using these consumer insights to formulate marketing strategies and offer to the customers what they want and when they want. E-business in this mode significantly reduces the costs associated with intermediaries, service centers and mass marketing campaigns. Since e-commerce makes just in time delivery possible, the supplier does not have to store the goods. He can procure them from the suppliers as and when he gets the order from the buyer through the internet.

B2C is the most popular form of e-commerce, wherein the individuals are directly involved in B2C e-commerce, and businesses use the internet for offering their products or services 24 hours a day through global access. The sites Amazon.com and Rediff are among these. These websites spell goods directly to consumers over the Internet. The two way accessibility feature of the internet enables operating companies to ascertain consumer preferences and buying trends directly.

There are five major activities involved in conducting B2C e-commerce.

1. **Info sharing:** A B2C e-commerce may use some or all of the following applications and technologies to share information with customers: Online advertisements, e-mail, newsgroups/discussion groups, company web site, online catalogs, message board systems, bulletin board systems, multiparty conferencing.

2. **Ordering:** A customer may use electronic e-mail or forms available on the company's web site to order a product from a B2C site. A mouse click sends the essential information relating to the requested piece(s) to the B2C site.
3. **Payment:** Credit cards, electronic checks, and digital cash are among the popular options that the customer has as options for paying for the goods or services.
4. **Fulfillment.** Fulfillment that is responsible for physically delivering the product or service from the merchant to the customer. In case of physical products(books, videos, CDs), the filled order can be sent to the customer using regular mail, MNG, Yurtiçi Cargo, FedEx, or UPS. As expected for faster delivery, the customer has to pay additional money. In case of digital products (software, music, electronic documents), the e-business uses digital documentations to assure security, integrity, and privacy of the product. It may also include delivery address verification and digital warehousing that stores digital products on a computer until they are delivered. The e-business can handle its own fulfillment operations or outsource this function to third parties with moderate costs.
5. **Service and support:** It is much cheaper to maintain current customers than to attract new customers. For this reason, e-businesses should do whatever that they can in order to provide timely, high-quality service and support to their customers.

c. Consumer to Consumer E-commerce (C2C)

Here interaction is between consumers to consumer. For example, in sites like e-Buy Bid or Buy.com, Baazi.com which are auction sites, one can virtually sell and buy any goods (either used or new ones). This form of e-commerce is nothing but the cyber version of the good old auction houses. If anyone wants to sell anything, all one has to do is post a message on the site, giving details of the product and the expected price and wait for an interested customer to turn up and buy it. The buyer gets in touch with the seller through the Internet and the deal is crossed once the amount is finalized. Online message boards and barters are also examples of C2C e-commerce.

d. Consumer-to-Business E-commerce (C2B)

E-commerce, by empowering the customer, has been strategically redefining business. An example of C2B model of e-commerce is the site Price line.com, which allows prospective airline travelers, tourists in need of hotel reservations etc. to visit its websites and indicate their preferred price for travel

between any two cities. If an airline is willing to issue a ticket on the customers offered price, the consumer can then travel to the mentioned destination at his terms.

e. Business to Employees E-commerce (B2E)

This is concerned more with marketing a corporation's internal processes more efficiently. Customer care and support activities also hold ground. The requirement is that are all self-service with applications on the web that the employees can use themselves. Examples of B2E applications include:

- Online insurance policy management
- Corporate announcement dissemination
- Online supply requests
- Special employee offers
- Employee benefits reporting
- Management

f. Business-to-government

Business-to-government (B2G) is a derivative of B2B marketing and often referred to as a market definition of "public sector marketing" which encompasses marketing products and services to various government levels - including central, state and local - through integrated marketing communications techniques such as strategic public relations, branding, advertising, and web-based communications.

Government agencies typically have pre-negotiated standing contracts vetting the vendors/suppliers and their products and services for set prices. These can be state, local or federal contracts and some may be grandfathered in by other entities. There are multiple social platforms dedicated to this vertical market and they have risen in popularity with the onset of the ARRA/Stimulus Program and increased government funds available to commercial entities for both grants and contracts.

g. Government-to-Business

Government-to-Business (G2B) is the online non-commercial interaction between local and central government and the commercial business sector, rather than private individuals (G2C).

Comparing Traditional Commerce and E-Commerce

In e-commerce there may be no physical store, and in most cases the buyer and seller do not see each other. The Web and telecommunications technologies play a major role, in e-commerce. Although the goals and objectives of both ecommerce and traditional commerce are the same—selling products and services to generate profits—they do it quite differently. Traditional commerce presents product information by using magazines, flyers. On the other hand, e-commerce presents by using web sites and online catalogs. Traditional commerce communicates by regular mail, phone yet e-commerce by e-mail. Traditional commerce checks product availability by phone, fax and letter. However, e-commerce checks by e-mail, web sites, and internal networks. Traditional commerce generates orders and invoices by printed forms but ecommerce by e-mail and web sites. Traditional commerce gets product acknowledgments by phone and fax. On the other hand, e-commerce gets by email, web sites, and EDI.

1.6 Impact of E-Commerce

E-commerce and e-business are not solely the Internet, websites or dot com companies. It is about a new business concept that incorporates all previous business management and economic concepts. As such, e-business and e-commerce impact on many areas of business and disciplines of business management studies. For example: Marketing issues of on-line advertising, marketing strategies and consumer behaviour and cultures. One of the areas in which it impacts particularly is direct marketing. In the past this was mainly door-to-door, home parties and mail order using catalogues or leaflets. This moved to telemarketing and TV selling with the advances in telephone and television technology and finally developed into e-marketing spawning 'CRM' (Customer Relationship Management) data mining and the like by creating new channels for direct sales and promotion. Continuous growth of E-commerce is expected to have deep impact on structure and functioning of economies at various levels and overall impact on macro-economy. Some key areas are discussed below:

Labour Market

E-Commerce, consisting of marketing and other business processes conducted over the computer-mediated networks is changing the way organizations in many

industries operate. It leads to the automation of some job functions and replaces others with self service operations, raising output per worker and dampening employment requirements in some occupations, as well as in the industries in which these occupations are concerned. The introduction and implementation of new technologies has posed important challenges for the commercial workers and their trade unions worldwide. In contrast, E-commerce has spurred employment in industries producing software, and systems used by e-commerce and other occupations associated with websites and networks.

Computer sciences

Development of different network and computing technologies and languages to support e-commerce and e-business, for example linking front and back office legacy systems with the 'web based' technology.

Finance and accounting –

Online banking; issues of transaction costs; accounting and auditing implications where 'intangible' assets and human capital must be tangibly valued in an increasingly knowledge based economy.

Economics

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

Production and operations management

The impact of on-line processing has led to reduced cycle times. It takes seconds to deliver digitized products and services electronically; similarly the time for processing orders can be reduced by more than 90 per cent from days to minutes. Production systems are integrated with finance marketing and other functional systems as well as with business partners and customers.

Production and operations management (manufacturing)

Moving from mass production to demand-driven, mass customization customer pull rather than the manufacturer push of the past. Web-based Enterprise Resource Planning systems (ERP) can also be used to forward orders directly to designers and/or production floor within seconds, thus cutting production cycle times by up

to 50 per cent, especially when manufacturing plants, engineers and designers are located in different countries. In sub-assembler companies, where a product is assembled from a number of different components sourced from a number of manufacturers, communication, collaboration and coordination are critical – so electronic bidding can yield cheaper components and having flexible and adaptable procurement systems allows fast changes at a minimum cost so inventories can be minimized and money saved.

Human Resource Management

Issues of online recruiting, home working and 'entrepreneurs' are working on a project by project basis replacing permanent employees.

1.7 Summary

Electronic commerce is a new way of conducting, managing and executing business transaction using computer and telecommunication networks. Electronic commerce is expected to improve the productivity and competitiveness of participating business by providing unprecedented access to an online global marketplace with millions of customers and thousand of product and service. Another goal is to provide participating companies with new, more cost and time efficient means for working with customers, suppliers and partners. In the present dynamic scenario, e-commerce market in the B2C space is growing in demand as well as in the array of services. The transition to online purchasing from traditional purchasing is taking a long time in the Indian market. E commerce includes not only buying and selling goods over Internet, but also various business processes within individual organizations that support the goal.

1.8 Self-Assessment Test

1. What do you understand by e-commerce? Discuss the Features of E-commerce Technology.
2. Explain the various e-commerce applications in business.
3. What are the types of e-commerce in industries?
4. Discuss the impact of e-commerce in India.
5. Explain the scope of e-commerce.
6. How does e-commerce differ from the traditional business mechanism?

1.9 Suggested Readings

1. Rania Nemat “Taking a look at different types of e-commerce”
2. Nisha Chanana, Sangeeta Goele “Future of E-commerce in India”
3. C. M. Abhilash “E-Commerce Law in Developing Countries: An Indian Perspective”
4. Pete Loshin, John Vacca, “Electronic Commerce”

Unit-2

Online Contracts and Privities of Contract

Objectives:

After going through this Unit you should be able to understand:

- Meaning and various types of online contract
- How online contract are formed
- Various issues relating to online contract
- Doctrine of privities of contract

Structure:

2.1 Introduction
2.2 Types of online contract
2.3 Procedures available for forming electronic contract
2.4 Legal issues of Online Contracts
2.5 Doctrine Privity of Contract
2.6 Summary
2.7 Self-Assessment Test
2.8 Suggested Readings

2.1 Introduction

An "electronic" contract is an agreement presented and consummated entirely in an on-line environment; most often on the Internet. E-contract is a contract modeled, specified, executed and deployed by a software system. E-contracts are conceptually very similar to traditional (paper based) commercial contracts. Vendors present their products, prices and terms to prospective buyers. Buyers consider their options, negotiate prices and terms (where possible), place orders and make payments. Then, the vendors deliver the purchased products. Nevertheless, because of the ways in which it differs from traditional commerce, electronic commerce raises some new and interesting technical and legal challenges.

Electronic contracts are governed by the basic principles provided in the Indian Contract Act, 1872, which mandates that a valid contract should have been entered with a free consent and for a lawful consideration between two majors. Section 10A of the Information Technology Act, 2000 provides validity to e-contracts. So, both Indian Contract Act and IT Act needs to be read in conjunction to understand and provide legal validity to e-contracts. Further, section 3 of the Evidence Act provides that the evidence *may be* in electronic form. The Supreme Court in *Trimex International FZE Ltd. Dubai v. Vedanta Aluminum Ltd.* has held that e-mails exchanges between parties regarding mutual obligations constitute a contract.

In an online environment, the possibility of **minors entering into contracts** increases, more so with the increasing usage of online medium among minors and their preference to shop online or purchase online goods/services. It becomes crucial for an online business portal to keep such possibility in consideration and qualify its website or form stating that the individual with whom it is trading or entering into the contract is a major.

Stamping of contracts is yet another issue. An instrument that is not appropriately stamped *may not be* admissible as evidence unless the necessary stamp duty along with the penalty has been paid. But payment of stamp duty is applicable in case of physical documents and is not feasible in cases of e-contracts. However, as the payment of stamp duty has gone online and e-stamp papers are available, it can become a possibility later that stamp duty might be asked on e-contracts as well.

The other crucial issue is the consent and the way offers are accepted in an online environment. In a click wrap and shrink wrap contract, the customers do not have any opportunity to negotiate the terms and conditions and they simply have to accept the contract before commencing to purchase. Section 16(3) of the Indian Contract Act provides that where a person who is in a position to dominate the will of another, enters into a contract with him, and the transaction appears, on the face of it or on evidence adduced, to be unconscionable, the burden of proving that such contract was not induced by undue influence shall lie upon the person in a position to dominate the will of the other. So, in cases of dispute over e-contracts the entity carrying out the e-commerce will have the onus to establish that there was no undue influence. Further, section 23 of the Indian Contract Act provides that the

consideration or object of any agreement is unlawful when it is forbidden by law, or is of such a nature that if permitted, it would defeat the provisions of any law; or is fraudulent, or involves or implies injury to the person or property of another, or the Court regards it as immoral or opposed to public policy.

2.2Types of Electronic Contracts

1. "Click-Wrap," "Click-Through," or "Web-Wrap" contacts are electronic contacts that require the user to scroll through terms and conditions (or multiple Web pages on a Web site) and to expressly confirm the user's agreement to the terms and conditions by taking some action, such as clicking on a button that states "I Accept" or "I Agree" or some similar statement, prior to being able to complete the transaction. Click-Through contracts are often found in software products or on Web sites.
2. "Browse-Wrap" contracts are terms and conditions of use that to do not require the express agreement of a user. They are often located in software or are posted on a Web site and may make some statement that indicates use of the software or Web site constitutes the user's agreement to the terms. Often such terms may not have been brought to the attention of the user.
3. "Electronic Mail (e-mail)," is a method of sending an electronic message from one person to another using the Internet, it is a convenient method of time-delayed direct communication. While an e-mail may be a singular message, it also possesses the ability to form contracts. Consequently, e-mail is viewed as both a formal and informal communications medium. People often regard informal e-mail arrangements and business correspondence as non-contractual events.

Essentials of an electronic contract

As in every other contract, an electronic contract also requires the following necessary ingredients:

1. An offer needs to be made

In many transactions (whether online or conventional) the offer is not made directly one-on-one. The consumer 'browses' the available goods and services displayed on the merchant's website and then chooses what he would like to purchase. The offer is not made by website displaying the items for sale at a particular price. This is actually an invitation to offer and hence is revocable at any

time up to the time of acceptance. The offer is made by the customer on placing the products in the virtual 'basket' or 'shopping cart' for payment.

2. The offer needs to be accepted

As stated earlier, the acceptance is usually undertaken by the business after the offer has been made by the consumer in relation with the invitation to offer. An offer is revocable at any time until the acceptance is made.

3. Lawful Consideration

Any contract to be enforceable by law must have lawful consideration, i.e., when both parties give and receive something in return. Therefore, if an auction site facilitates a contract between two parties where one person provides a pornographic movie as consideration for purchasing an mp3 player, then such a contract is void.

4. Intention to Create Legal Relations

If there is no intention on the part of the parties to create legal relationships, then no contract is possible between them. Usually, agreements of a domestic or social nature are not contracts and therefore are not enforceable, e.g., a website providing general health related information and tips.

5. The parties must be competent to contract

Contracts by minors, lunatics etc are void. All the parties to the contract must be legally competent to enter into the contract.

6. Free Consent

Consent is said to be free when there is absence of coercion, misrepresentation, undue influence or fraud. In other words, there must not be any subversion of the will of any party to the contract to enter such contract. Usually, in online contracts, especially when there is no active real-time interaction between the contracting parties, e.g., between a website and the customer who buys through such a site, the **click through procedure** ensures free and genuine consent.

7. The object of the contract must be lawful

A valid contract presupposes a lawful object. Thus a contract for selling narcotic drugs or pornography online is void.

8. Certainty and Possibility of Performance

A contract, to be enforceable, must not be vague or uncertain and there must be possibility of performance. A contract, which is impossible to perform, cannot be enforced, e.g., where a website promises to sell land on the moon.

2.3 Procedures available for forming electronic contracts

1. **E-mail:** Offers and acceptances can be exchanged entirely by e-mail, or can be combined with paper documents, faxes, telephonic discussions etc.
2. **Web Site Forms:** The seller can offer goods or services (e.g. air tickets, software etc) through his website. The customer places an order by completing and transmitting the order form provided on the website. The goods may be physically delivered later (e.g. in case of clothes, music CDs etc) or be immediately delivered electronically (e.g. e-tickets, software, mp3 etc).
3. **Online Agreements:** Users may need to accept an online agreement in order to be able to avail of the services e.g. clicking on "I accept" while installing software or clicking on "I agree" while signing up for an email account.

2.4 Legal issues of Online Contracts

Existence of a valid contract forms the crux of any transaction including an e-commerce transaction. In India, e-contracts like all other contracts are governed by the basic principles governing contracts in India, i.e. the Indian Contract Act, 1872 which inter alia mandate certain pre-requisites for a valid contract such as free consent and lawful consideration. What needs to be examined is how these requirements of the Indian Contract Act would be fulfilled in relation to e-contracts. In this context it is important to note that the Information Technology Act, 2000 provides fortification for the validity of e-contracts.

Unless expressly prohibited under any statute, e-contracts like click-wrap agreements would be enforceable and valid if the requirements of a valid contract as per the Indian Contract Act are fulfilled. Consequently the terms and conditions which are associated with an e-commerce platform are of utmost importance in determining and ensuring that e-commerce transactions meet with the requirements of a valid online contract.

i. Signature Requirements

There is no requirement under the Indian Contract Act to have written contracts physically signed. However, specific statues do contain signature requirements. For instance the Indian Copyright Act, 1957 states that an assignment of copyright needs to be signed by the assignor. In such cases the Information Technology Act equates electronic signature with physical signatures. An electronic signature is supposed to be issued by the competent authorities under the Information Technology Act.

ii. Contracts with Minors

The nature of e-commerce is that is virtually impossible to check the age of anyone who is transacting online. This may pose problems and liabilities for e-commerce platforms. The position under Indian law is that a minor is not competent to enter into a contract and such a contract is not enforceable against the minor. The age of majority is 18 years in India.

iii. Stamping Requirements

Every instrument under which rights are created or transferred needs to be stamped under the specific stamp duty legislations enacted by different states in India. An instrument that is not appropriately stamped may not be admissible as evidence before a competent authority unless the requisite stamp duty and the prescribed penalty have been paid. In some instances criminal liability is associated with intentional evasion of stamp duty. However, the manner of paying stamp duty as contemplated under the stamp laws is applicable in case of physical documents and is not feasible in cases of e-contracts.

Place of contract and the jurisdiction of court

Under the traditional rules of contracts in the real world, the place where a contract is concluded is the place where the letter of acceptance is posted (where the postal rule is applicable) and in the case of instantaneous contracts it is where the offer or receives the acceptance.

The IT Act proposes that the place of the dispatch and the place of receipt is the place where the originator and the acceptor have their respective places of business. This means that irrespective of the place from where the electronic record is sent or received, the place of contract would be either a place where business of the offer or the acceptor is.

This would lead to some contradiction with the Civil Procedure Code which in Section 20 lays down that a suit may be brought up in the place where the defendant has his place of business or where the cause of action arises. The place where the cause of action occurs may be the place where the contract takes place or where the performance takes place. The Information Technology Act appears to have fused these two concepts of place of business and the place where the contract is formed

The situation may be summed up as under: That in the case of e-mail contracts the place of contract formation will be the place where the acceptor has his place of business and in the case of web-click contracts, the place of contract will be the place where the offer or has his place of business. Thus, by fusing the concepts of place of contract formation and the defendant's place of business, the jurisdictional avenues available to the aggrieved party appear to have been limited.

Time of formation of contract

The importance of time of formation of contract is well known to any student of law viz. to decide priorities between competing claims, to determine the law applicable to the contract etc. The time aspect of contract formation is also important in ascertaining the place aspect of contract formation. If the contract is classified as one where the postal rule applies, then the place of formation of contract would be the place where the acceptor commits his acceptance. On the other hand, if it is classified as one to which receipt rules would apply, then the place where the contract would be formed would be the place where the offer or receives acceptance.

Thus, it is essential that the law determines the "when" of contract formation. The Model Law guidelines state that the Model Law does not intend to define the "when" and "where" of contract formation. The Model Law only lays down a framework of rules regarding dispatch and receipt of electronic records. The principles of formation of contract are to be arrived at by a combined application of the domestic contractual principles and the relevant provisions of the Model Law.

The rules regarding formation of contract can be broadly grouped into two categories:

a) Mailbox rule or postal rule which is applicable when the means of communication is non-instantaneous like post, telegraph etc. which states that a contract comes

into effect when the acceptor *commits his acceptance to the post*. The rule is designed to remove uncertainty from the contract-formation process. It provides the offered with the confidence that an acceptance once posted will be effective even if postal system delays delivery of the acceptance beyond the offer date, and

b) Receipt rule which is applicable when the communications are instantaneous like telephone, telex or fax. It lays down that a contract is complete when the *acceptance is received* by the offer or.

The Information Technology Act, Section 13 provides the framework for understanding the principles of contract formation in the cases of electronic contracts. It lays down inter alia, that, unless *otherwise agreed*:

1. the *dispatch* of an electronic record occurs when it enters a computer resource outside the control of the originator;
2. *the time of receipt of* an electronic record is the time when record enters the designated computer resource (if the addressee has a designated computer resource);
3. if the electronic record is sent to a computer resource of the addressee that is not the designated computer resource, *receipt* occurs at the time when the electronic record is retrieved by the addressee;
4. If the addressee has not designated a computer resource along with specified timings, if any, *receipt* occurs when the electronic record enters the computer resource of the addressee.

However, the above rules do not tell us anything more than when dispatch and receipt of electronic records takes place. Therefore, in order to understand the rules relating to electronic contract formation, the principles of the Indian Contract Act will have to apply in this context. Section 4 of the Contract Act lays down the following rules regarding communications of offers and acceptances:

1. The communication of a proposal is complete when it comes to the knowledge of the person to whom it is made.
2. The communication of an acceptance is complete, — as against the proposer, when it is put in a course of transmission to him, so as to be out of the power of the acceptor; as against the acceptor, when it comes to the knowledge of the proposer.
3. The communication of a revocation is complete as against the person who makes it, when it is put into a course of transmission to the person to whom it is made, so

as to be out of the power of the person who makes it; as against the person to whom it is made, when it comes to his knowledge.

4. A combined application of Section 4 of the Contract Act and Section 13 of the Information Technology Act would reveal the following law for contract formation in the case of electronic contracts in the event that nothing contrary has been agreed to between the parties in their contract:

a) The communication of an offer becomes complete at the time when the electronic offer enters any information system designated by the offeree for the purpose, or, if no system is designated for the purpose, when the electronic offer enters the information system of the offeree, or, if any information system has been designated, but the electronic offer is sent to some other information system, when the offeree retrieves such electronic record.

b) The communication of an acceptance is complete — as against the offeror when the electronic acceptance is dispatched such that it enters a computer resource outside the control of the acceptor.

c) As against the acceptor, the communication of acceptance would be complete when the electronic acceptance enters any information system designated by the offer or for the purpose, or, if no system is designated for the purpose, when the acceptance enters the information system of the offer or, or, if any information system has been designated, but the electronic record is sent to some other information system, when the offer or retrieves such electronic acceptance.

d) The communication of revocation (of an offer or acceptance) is complete as against the person who makes it when the electronic record is dispatched such that it enters a computer resource outside the control of the person making such offer or acceptance.

e) As against the person to whom it is made, such revocation is complete when it comes to his knowledge i.e. Rule (2), (3) or (4) of Section 13 enunciated above would apply.

A binding contract would take place once the acceptor dispatches the electronic record such that it enters a computer resource outside the control of the acceptor.

However, the above proposition may not hold well in all types of electronic contracts. The Supreme Court in *Bhagwandas* v.*Girdharlal,* following the English decision in *Entores Ltd.* v. *Miles Far East Corpn,* has held that Section 4 of the

Contract Act is only applicable in cases of non-instantaneous forms of communication and would not apply when instantaneous forms of communication are used. The Court observed that the draftsman of the Contract Act did not contemplate the use of instantaneous means of communications. Hence, where proposal and acceptance are made by instantaneous means of communications like the telephone, telex etc., the postal rule does not apply and the contract is made where the acceptance is received. Therefore, the default rules elucidated above may have relevance only in non-instantaneous forms of contract formation. In the electronic context, the following two situations need to be considered: (*a*) E-mail contracts. (*b*) Web-click contracts.

a) ***E-mail contracts***: Though e-mail communication has some of the trappings of instantaneous communication, nevertheless, it is a fragmented process involving many stages. The e-mail message is split into various packets and sent via different routes. Further, unlike in instantaneous forms of communication, the sender does not know if the transmission of the e-mail is successful, for even though he gets a delivery receipt, it only signals delivery to the mailbox and does not indicate that the other party has the knowledge of the receipt. Thus, e-mail messages would come under the category of non-instantaneous form of communication. The default rules enunciated above would apply to e-mail contracts.

b) ***Web-click contracts***: The case of web-click or click-wrap contracts is different as such contracts are formed instantaneously: "The main difference between click-wrap contracts and e-mail is that communications between web clients and servers, unlike e-mails is instantaneous. The best way to imagine the transfer of data between computers is to treat it as a telephone conversation, just one between computers rather than individuals. If either party goes offline at any point, the other will be aware of the change in status. This is because all communications between clients and servers have an inbuilt self-checking mechanism called a check sum."

Applying the ratio of *Bhagwandas* and *Entores cases* it would seem that in web-click contracts a contract is completed when the offer or receives the acceptance in contradistinction to the postal rules applicable to e-mail contracts. Further, communication of an offer or acceptance in the web-click mode is complete when the addressee is in receipt of the electronic record as defined in Section 13(2) of the Information Technology Act, 2000.

2.5 Doctrine Privity of contract

As per the dictionary meaning privity of contract means: Legal doctrine that a contract confers rights and imposes liabilities only on its contracting parties. Privity is the legal term for a close, mutual, or successive relationship to the same right of property or the power to enforce a promise or warranty. As per the legal definition of privity of contract: "The doctrine of privity in contract law provides that a contract cannot confer rights or impose obligations arising under it on any person or agent except the parties to it."

The doctrine of privities of contract means that only those involved in striking a bargain would have standing to enforce it. In general this is still the case, only parties to a contract may sue for the breach of a contract, although in recent years the rule of privities has eroded somewhat and third party beneficiaries have been allowed to recover damages for breaches of contracts they were not party to. There are two times where third party beneficiaries are allowed to fall under the contract. The duty owed test looks to see if the third party was agreeing to pay a debt for the original party. The intent to benefit test looks to see if circumstances indicate that the promise intends to give the beneficiary the benefit of the promised performance. Any defense allowed to parties of the original contract extend to third party beneficiaries. A recent example is in England, where the Contract (Rights of Third Parties) Act 1999 was introduced.

Indian law is practically same as the English common law. However, under the Indian law 'consideration may move from the promise or any other person.' In the chimney vs. rammayya case, an old lady by a deed of gift, gave over certain properties to her daughter under the direction that she should pay her aunt a certain sum of money. The same day the daughter refused to pay her aunt the money on the plea that no consideration has moved from her aunt to her. It was held that sister of the old lady (aunt) was entitled to maintain the suit as consideration had move from the old lady, for her sister to the daughter.

Third Party Beneficiary

A third party beneficiary, in the law of contracts, is a person who may have the right to sue on a contract, despite not having originally been a party to the contract. This right arises where the third party is the intended beneficiary of the contract, as opposed to an incidental beneficiary. It vests when the third party relies

on or assents to the relationship, and gives the third party the right to sue either the promissory or the promise of the contract, depending on the circumstances under which the relationship was created.

In order for a third party beneficiary to have any rights under the contract, he must be an intended beneficiary, as opposed to an incidental beneficiary. The burden is on the third party to plead and prove that he was indeed an intended beneficiary.

Intended beneficiary

An intended beneficiary is that one party - called the promise - makes an agreement to provide some consideration to a second party - called the promissory - in exchange for the promise's agreement to provide some product, service, or support to the third party beneficiary named in the contract. The promise must have an intention to benefit the third party - but this requirement has an unusual meaning under the law. Although there is a presumption that the promise intends to promote the interests of the third party in this way, if party A, contracts with party B, to have a thousand killer bees delivered to the home of A's worst enemy, party C, then C is still considered to be the intended beneficiary of that contract.

There are two common situations in which the intended beneficiary relationship is created. One is the creditor beneficiary, which is created where A owes some debt to C, and A agrees to provide some consideration to B in exchange for B's promise to pay C some part of the amount owed.

The other is the done beneficiary, which is created where A wishes to make a gift to C, and A agrees to provide some consideration to B in exchange for Bethany's promise to pay C the amount of the gift. Under old common law principles, the donee beneficiary actually had a greater claim to the benefits this created; however, such distinctions have since been abolished.

An incidental beneficiary is a party who stands to benefit from the execution of the contract, although that was not the intent of either contracting party. If the contract is breached by either party, an incidental third party has no rights to recover anything under the contract.

Judicial Trends in India

In Jamna Das v. Ram Autar and others[1], the Privy Council rejected a stranger's claim to enforce the contract against a contracting party. In this case, the owner of certain immovable property mortgaged the property and borrowed Rs. 40,000/- from the appellant. She (mortgagor) subsequently, sold the same property to the respondent no.1 (Ram Autar Pandey) for Rs. 44,000/- (other respondents were his representatives). She allowed the purchaser to retain Rs. 40,000/- to redeem the mortgaged property. The plaintiff sued the defendants (purchaser) for recovery of this debt. Although, he got decree against other representatives but not against Ram Autar. He, therefore, made an appeal to the privy Council. The Privy council dismissed the appeal with costs. It is, thus, clear that the mortgagee failed to recover benefit of contract only because he was not a privities to the contract.

In N. Devraje Urs v. Ramakrishna[2] the plaintiff constructed a house for a lady. She sold the house to the defendant without paying the plaintiff the construction cost. She left a part of purchase money with the defendant with a direction that the defendant, though made a part payment but did not pay the whole sum. The plaintiff sued for remaining part of the money. The Court held that the plaintiff was entitled to recover the amount. In Veramma v. Appaya[3] a stranger's action was again allowed by the Andhra Pradesh High Court. In that case, there was a family dispute over certain house and vacant site. A compromise was made. Under terms of the compromise the defendant agreed with the plaintiff's husband to transfer the house and vacant site to the plaintiff. It was also agreed that in lieu of this agreement, the plaintiff would maintain her father till his death. The defendant failed to perform his promise. The plaintiff sued to enforce the contract. The Court held that the defendant was liable

The Court said that the plaintiff was a beneficiary under the compromise arrangement and thus, a trust was created in her favor. So she was entitled to specific performance of the arrangement.

In Ramesh Kumar Singh and Another's vs. Kristo Sao and another[4], it has been held that Insurance Co. is liable to pay compensation in respect of third party

[1] I.L.R. (1912) 34 All. 63; L.R. 39 I.A. 7.

[2] A.I.R. (1952) Mysore 111

[3] A.I.R. (1957) A.P. 965

[4] 2008 T.A.C. Chhattisgarh

risk. New India Assurance Company Ltd. vs. Nandram Prajapati and Another[5], it was held that deceased was a third party and entitled to claim.

National Insurance Co. Godhra vs. Shabbir Mohammad Kunj and others[6] Motor Vehicle Act, 1988 Sec. 149 third party risk- liability of Insurance Company occupants of private vehicles are third parties in the eye of law. Death or bodily injury to such persons would entitle them to claim compensation from insurers even without any additional premium by owners of private vehicles.

Although, the Indian Contract Act, 1872 does not contain any specific provision which deals with the doctrine of privities of contract, the doctrine is implicit in several provisions of the Contract Act. It is also clear from the judicial decisions that the doctrine of privities of contract was approved by Privy Council.[7] Most of the Indian High Courts also followed the decisions of the Privy Council and did not enforce a stranger's claim to a contract. The opinion of the High Court is divided on the point. But, the Supreme Court, finally, established the doctrine of privity of contract.[8] However, the Supreme Court has held that the doctrine of privity of contract has two exceptions. First, a beneficiary under a contract which creates a trust can sue the contract and secondly, a beneficiary under a contract involving a family arrangement can enforce the contract. It is to be noted that these exceptions to the privity rule were also accepted by the Privy Council[9] in India before independence. But, it was the leading case of M.C. Chacko v. State Bank of Travancore[10] where the doctrine of privity of contract and exception to the doctrine were finally settled by the Supreme Court.

2.6 Summary

Online Contracts are well suited to facilitate the re-engineering of business processes occurring at many firms involving a composite of technologies, processes, and business strategies that aids the instant exchange of information.

[5] 2008 T.A.C. 443 (M.P.)

[6] A.I.R. 2009 (Guj.)

[7] Jamna Das v. Ram Autar, L.R. 39 I. A. 7;

[8] M.C. Chacko v. State Bank of Travancore, A.I.R. (1970) S.C. 504.

[9] Khawaja Muhammad Khan v. Husaini Begum, (1910) 37 I.A. 52;

[10] Jang Bahadur, A.I.R. (1938) P.C. 245

The e-contacts have their own merits and demerits. On the one hand they reduce cost, saves time, fasten customer response and improve service quality by reducing paper work, thus increasing automation. With this, e-commerce is expected to improve the productivity and competitiveness of participating business by providing unprecedented access to an online global market place with millions of customers and thousands of products and services. On the other hand, since in electronic contract, the proposal focuses not on humans who make decisions on specific transactions, but on how risk should be structured in an automated environment. Therefore the object is to create default rules for attributing a message to a party so as to avoid any fraud and discrepancy in the contract.

2.7 Self-Assessment Test

1. What do you understand by Online Contract? What are its essentials?
2. Discuss the various types of Online Contract.
3. What are the essential requirements of a valid online contract?
4. State the rules regarding time and place of online contract.
5. Explain the 'Doctrine of Privity of Contract'.

2.8 Suggested Readings

1. Vancouver, BC and Jeffery E. Wittmann "Electronic Contracts"
2. Rohas Nagpal, "Electronic contracts & the Indian law", Asian School of Cyber Laws
3. F. Tasneem, "The Legal Issues of Electronic Contracts in Australia"
4. Sarabdeen Jawahitha and Noor Raihan Ab Hamid, "Electronic Contract and the Legal Environment"
5. Neeraj Dubey, " Legal issues in e-commerce: Think before you click"
6. Avery Wiener Katz, "Is Electronic Contracting Different? Contract Law in the Information Age"

Unit-3

Jurisdiction Issues of E-Commerce

Objectives:

After going through this Unit you should be able to understand:

- The meaning and concept of jurisdiction
- International and national laws concerning the jurisdiction issue of e-commerce
- Provisions of Indian statutes regarding jurisdiction of e-commerce

Structure:

3.1 Introduction
3.2 Jurisdiction Issues of E-commerce at Global Level
3.3 Indian Position
3.4 Indian Statutes and E-commerce Jurisdiction
3.5 Summary
3.6 Self-Assessment Test
3.7 Suggested Readings

3.1 Introduction

Jurisdiction in general refers to "A government's general power to exercise authority over all persons and things within its territory". Same situation with regards to court's jurisdiction also, it is the geographical area within which the judiciaries have the authority to adjudicate the disputes. In any dispute, one of the primary issues that a court determines is whether or not the said court has jurisdiction to try the dispute; a court must have both subject-matter jurisdiction (i.e. jurisdiction over the parties involved in the dispute) and territorial jurisdiction.

The increased use of the internet has led to a virtual world which is not possible to be restricted in terms of traditional concepts of territory; this has led to complications in determining jurisdiction. According to the traditional rules of jurisdiction determination, the courts in a country have jurisdiction over individuals who are within the country or to the transactions and events that occur

within the natural borders of the nation. Therefore, in e-commerce transactions, if a business derives customers from a particular country as a result of their website, it may be required to defend any litigation that may result in that country.

If we talk about cyberspace jurisdiction the situation is different from physical world.

The term "cyber jurisdiction' generally encompasses the system operators or users power to frame rules and enforce them in an "apparent virtual community" interacting in cyberspace, or virtual space in the cyber world which is perceived as a place on the Internet and is independent from the normal government regulations. In this virtual world the cyber jurisdiction can be exercised. As a result of internet a market place has developed in the virtual world. The users of any computer, connected through Internet, can access to the website and enter into contract anywhere in the world. Such a contract is called e-contract. The e-contract is entered in the e-commerce. It means that all the obligation of valid contract is there in e-commerce. The existed of offer from one side and acceptance from the other side is there in a business transactions through internet. All the obligations in e-commerce need not be in only electronic form, there may be a situation where one party may perform their obligation in a physical form. As a result, any content placed on an e-commerce platform is to be reviewed for compliance with the laws of any jurisdiction where an organization wishes to market, promote or sell its products or services as it may run the risk of being sued in any jurisdiction where the goods are bought or where the services are availed of.

3.2 Jurisdiction Issues of E-commerce at Global Level

The jurisdictional issue in e-commerce is very important at global level. For instance, an Indian company accepts an offer from an American company over the internet to render certain service in Singapore and the ISP of the Indian Company (and its server) is in London and that of the American company is in Colombo, the determination of the choice of law would indeed be a challenging task, leading to consequences not intended by the contracting parties. In the cyber space quite often parties physically located in different countries may enter into a contract. A legal issue which arises is: which country (or which state within in a country) will have jurisdiction. One possible solution that would be given is: it will be decided on the

basis of the 'choice of forum' clause. But it is no simple there also the problem arises related to choice of forum court having the jurisdiction to decide arises under the e-contract, otherwise the clause related to forum would be invalid and hence, unenforceable.

The main trouble and problem about the internet jurisdiction is the presence of multiple parties in various parts of the world who have a virtual nexus with each other. The question arises in such cases that if one party wants to sue the other, then where can one sue? The municipal laws traditionally require two areas, the place where the defendant resides, and where the cause of action arises. However, in the context of internet, both these are difficult to establish with any certainty. In addition to this a situation of conflict of laws among nations may also arise. For example some websites may be obscene in India but legal in US. They can be viewed in India by assessing the websites & may amount to an offence under the Indian Law, but they are not illegal in US where these sites are hosted.

In determining the personal jurisdiction of a court over a foreign defendant is to be applicable or not, the 'minimum contracts' rule is to be followed in US courts. This rule was developed in US by US Supreme Court in the leading judgment, International Shoe Co. v Washington. This minimum contract test allows for the jurisdiction over a non-resident when such contract exists between the defendant and the Forum State such that "maintenance of the suit does not offend 'traditional notions of fair play and substantial justice. This Courts minimum contracts test for specific jurisdiction abandons more formalistic tests that focus on a defendant presence within a state in favor of a more flexible inquiry into whether a defendants contracts with the forum made it reasonable, in the context of the US federal system of government, to require it to defend the suit in that state.

In US, the reasonableness requirement is captured in the minimum contacts or purposeful a ailment test. The principle being that a defendant cannot be bought before a court of a particular State unless that person has minimum contacts, so that maintenance of the suit does not offend traditional notion of fair play and substantial justice. In order to achieve the balance between the two main object behind the entering into e-commerce i.e. first, cost effectiveness and the second one is that it allows the business providers to insulate themselves against the jurisdiction in every state, except the place where they are physically located,

would be troublesome and unreasonable to the consumers situated across the globe, who have lesser bargaining power and resources to litigate in foreign country. The US courts have applied the principle of minimum contact, effective functions and the theory of long arm statute, with necessary adaptations to e-contracts.

3.3 Indian Position

With regards to the Indian position related to the internet disputes, the jurisdiction is theoretically matches with United States 'minimum contact'. The jurisdiction aspect of the courts in civil matter is governed by, the Code of Civil Procedure Code, 1908. Territorial jurisdiction in India granted by the Code of Civil Procedure Code on the basis of place of residence of the defendant and secondly, the place where the cause of action arises. The cause of action can also arise at various places. The places can be domestic places and also international places. Section 20 of the Code of Civil Procedure Code deals with the situation where cause of action arises in more than one place. This Section through interpretation applies to transnational issues as well as private international law.

E-commerce through its nature, especially in its business to business or business to consumer model, to be looked in relations to the jurisdictional aspect, from the two possible sources:

Jurisdiction based on Forum of Choice

In this situation parties have decided there choice of jurisdiction beforehand. Parties can decide any courts at national jurisdiction as well as to decide the dispute neutral forum in the foreign country. The court which has been decided by the parties to settle their future dispute should have the jurisdiction to entertain the case.

Jurisdiction based on Choice of Law

In this case the private international law principles are very important, so as to identify in case of parties belonging to different country, which country law will apply in order to settle their dispute. The modern theory of conflict of Laws recognizes the jurisdiction of the state, which has the most ultimate contact with the issue arising in the case. There are some limitations on the parties while going for this rule, and they are; the choice of law must be bona fide and should not be

opposed to public policy, in the absence of express choice, law which have closest and more real connection to be taken and in the absence of any arbitration law to be applicable then choice of law country law will be applicable.

The Information Technology Act proposes that the place of the dispatch and the place of receipt is the place where the originator and the acceptor have their respective places of business. This means that irrespective of the place from where the electronic record is sent or received, the place of contract would be either a place where business of the offer or the acceptor is.

This would lead to some contradiction with the Civil Procedure Code which in Section 20 lays down that a suit may be brought up in the place where the defendant has his place of business or where the cause of action arises. The place where the cause of action occurs may be the place where the contract takes place or where the performance takes place. The Information Technology Act appears to have fused these two concepts of place of business and the place where the contract is formed.

The situation may be summed up as under: That in the case of e-mail contracts the place of contract formation will be the place where the acceptor has his place of business and in the case of web-click contracts, the place of contract will be the place where the offer or has his place of business. Thus, by fusing the concepts of place of contract formation and the defendant's place of business, the jurisdictional avenues available to the aggrieved party appear to have been limited.

The traditional approach to jurisdiction invites a court to ask whether it has the territorial, pecuniary, or subject matter jurisdiction to entertain the case brought before it. With the internet, the question of 'territorial' jurisdiction gets complicated largely on account of the fact that the internet is borderless. Therefore, while there are no borders between one region and the other within a country there are no borders even between countries.

3.4 Indian Statutes and E-commerce Jurisdiction

E-commerce websites operating in India are required to follow many laws of India including the Information Technology Act, 2000. As per the IT Act, 2000 these e-commerce websites operating in India are Internet intermediaries and they are required to comply with cyber law due diligence requirements as well.

Further, the legal requirements for undertaking e-commerce in India also involve compliance with other laws like contract law, Indian penal code, etc. Further, online shopping in India also involves compliance with the banking and financial norms applicable in India.

The highly profitable e-commerce segment of India must be explored only after complying with the laws governing the respective e-commerce segment. There is no single set of laws and regulations that govern all e-commerce segments and every e-commerce segment is governed by different laws.

A. Information Technology Act, 2000

The objectives of the Information Technology Act are to provide legal recognition for E-commerce transactions, facilitate Electronic Governance and to amend the Indian Penal Code, 1860; Indian Evidence Act, 1872; the Bankers' Book Evidence Act 1891 and the Reserve Bank of India Act, 1934. The Act also establishes a regulatory framework for cyber laws and lays down punishment regimes for different cyber crimes and offences.

Jurisdiction is an important issue under an electronic contract. The ease of accessibility that is conferred upon the parties in an electronic commerce creates challenges for the legal system.

Section 13 of the Information Technology Act answers this by bringing clarity and objectivity to this issue. The Section deals with four major issues from both sides, i.e the Proposer and the Acceptor. The issues are:

- The Time of Receipt of Electronic Contract
- The Place of Receipt of Electronic Contract

These issues can be decided by the Parties, through a prior agreement. But, if there is no such agreement, then the default position under Sec 13 of the Information Technology Act will take place.

In this case, Dispatch means, when the electronic information has moved from the computer resource and is beyond the control of the originator; while Receipt means when the electronic information has moved in a computer resource which is within the control of the receiver.

The Time of Dispatch or Receipt will be determined based on the time the electronic information was received or sent from the Designated Computer Resource (DCR). The Designated Computer Resource means the computer address

or the web address which has been designated for sending and receiving such electronic information. Thus, there may be three scenarios:

I. A DCR exists and the information was sent or received by it, thus, based on the time the information was sent or received by it, the time of Receipt or Dispatch will be decided.

II. A DCR do not exists, then the moment the information is received or sent by any computer resource of that person or entity, the time will be decided based on that.

III. A DCR exists but the information was sent to any other Computer Resource, then unless the information is sent to DCR, the communication will be held to have not taken place.

The Place of Dispatch or Receipt will mean the physical Place of business where the party intended to receive such electronic information.

In case, the party has not clarified or does not have any such physical place of business, then it will include the usual place of residence of the party. This issue of place is important to decide the legal issue of jurisdiction.

As, due to the advancement in the electronic communication, the information terminal are not fixed and electronic information can be accessed from any place at any time. It becomes difficult to determine which Court shall have the jurisdiction in case of any dispute. Thus, Sec 13 clarifies that the intended physical place of business will be the place for receipt and dispatch of any electronic information.

The issue of Place in case of Electronic Contract was given the first judicial clarity in the case of P R Transport Agency v. Union of India (AIR 2006 All 23). In this case one of the issues before the Allahabad High Court was: “Does the Court have jurisdiction?”

In this case, P R Transport Agency (PRTA) was awarded a tender by BCCL in Jharkhand. The acceptance of the PRTA’s bid was conveyed through an e-mail. The e-mail was received at Chamauli, Uttar Pradesh(U.P.). The respondent contended that since the tender had taken place in Jharkhand, no cause of action arose in Uttar Pradesh. The Court relied on Sec 13(3) of the Information Technology Act and held that when the mail was sent, it was intended for the address from where the Company was working. Since, the office of the Company was in Chamauli and Varanasi, both of which fell within U.P so the High Court had jurisdiction. So, a partial cause of action arose which allows the High Court to

exercise its jurisdiction. There were other issues also discussed by the Court, but for our consideration, I have focused on the issue of place in case of Electronic Contract under section 13 of the IT Act.

In this case, the Court could have given more clarity to this issue, as at many places the High Court has used the term "Chamauli/Varanasi" for the ease of deciding the jurisdiction of High Court. The court could have clarified that the Jurisdiction lies with one of the two places.

The provisions of Information Technology Act enables the act applicable also to those offences or contraventions committed outside India by any person irrespective of his nationality if the act or conduct constituting the offence or contravention involves a computer, computer system or computer network located in India.

Example: Mr. A, a person residing in America, provides an online service to the consumers all over the world. If Mr. A commits an offence under the IT Act, 2000, then also he can be sued in Indian Courts.

The Information Technology Act 2000 attempts to change outdated laws and provides ways to deal with cyber crimes. Let's have an overview of the law where it takes a firm stand and has got successful in the reason for which it was framed.

1. The E-commerce industry carries out its business via transactions and communications done through electronic records. It becomes essential that such transactions be made legal. Keeping this point in the consideration, the Information Technology Act 2000 empowers the government departments to accept filing, creating and retention of official documents in the digital format. The Act also puts forward the proposal for setting up the legal framework essential for the authentication and origin of electronic records / communications through digital signature.
2. The Act legalizes the e-mail and gives it the status of being valid form of carrying out communication in India. This implies that e-mails can be duly produced and approved in a court of law, thus can be a regarded as substantial document to carry out legal proceedings.

Example: If, Mr. A offers Mr. B to provide transport services via e-mail and Mr. B subsequently in his reply affirms the same via e-mail itself, then this can be considered as valid means of carrying out communication.

3. The act also talks about digital signatures and digital records. These have been also awarded the status of being legal and valid means that can form strong basis for launching litigation in a court of law. It invites the corporate companies in the business of being Certifying Authorities for issuing secure Digital Signatures Certificates.

Example: Mr. A, enters into an online contract (along with a attached Digital Signatures Certificate) with Mr. B to provide transport services to Mr. B. if Mr. A makes a default in providing such facility to Mr. B, then in such a case Mr. B can produce such document in court of law.

B. The Indian Penal Code, 1861

The Act provides for punishment of offences committed beyond the four walls of India, but which by law may be tried within, India. It states that any person liable, by any Indian law to be tried for an offence committed beyond India shall be dealt with according to the provisions of this Code for any act committed beyond India in the same manner as if such act had been committed within India.

Section 3 of the Indian Penal Code provides that any person who is liable, by any Indian law, to be tried for an offence committed beyond India shall be dealt with according to the provisions of the Indian Penal Code for any act committed beyond India in the same manner as if such act had been committed within India.

There does not seem too much jurisprudence in India on the issue of jurisdiction in cases of e-commerce. However there are some instances where in the courts had in the preliminary stages assumed jurisdiction over a matter.

Example: In the case of **SMC Pneumatics (India) Pvt. Ltd. v. Jogesh Kwatra**, the Delhi High Court assumed jurisdiction where a corporate reputation was being defamed through e-mails.

Further, the Act also provides for extension of the Code to extra-territorial offences. The provisions of this Code apply also to any offence committed by any person in any place without and beyond India committing offence targeting a computer resource located in India. It further defines the word “offence” includes

every act committed outside India which, if committed in India, would be punishable under this Code.

Example: Mr. X, a person residing in America, provides an online service to the consumers all over the world. If Mr. X commits an offence targeting a computer resource located in India under the IPC, 1860, then he can be held liable under the Act.

C. The Civil Procedure Code, 1908

The Act gives the discretion to the plaintiff to file a suit for compensation for wrongs to person or movables, if the wrong was done within the local limits of the jurisdiction of one Court and the defendant resides, or carries on business, or personally works for gain, within the local limits of the jurisdiction of another Court, the suit may be instituted at the option of the plaintiff in either of the said Courts.

Examples: Mr. A, residing in Delhi, publishes on his website in Calcutta statements defamatory of B. B may sue A either in Calcutta or in Delhi.

The Act further provides that every suit shall be instituted in Court within the local limits of whose jurisdiction the any of the defendant resides or the cause of action arises. It further explains that a corporation shall be deemed to carry on business at its sole or principal office in India or, in respect of any cause of action arising at any place where it has also a subordinate office, at such place.

Example: A is a tradesman who updates his website in Calcutta; B carries on business in Delhi. B buys goods of A, online and requests A to deliver them to the East Indian Railway Company. A delivers the goods accordingly in Calcutta. A may sue B for the price of the goods either in Calcutta, where the cause of action has arisen or in Delhi, where B carries on business.

Furthermore, it also makes a foreign judgment to be conclusive as to any matter thereby directly adjudicated upon between the same parties or between parties under whom they or any of them claim litigating under the same title except under certain specified conditions. Talking about the presumption as to foreign judgments the provisions of the Act states that the Court shall presume upon the production of any document purporting to be a certified copy of a foreign judgment that such judgment was pronounced by a Court of competent jurisdiction, unless

the contrary appears on the record; but such presumption may be displaced by proving want of jurisdiction.

Example: A is a tradesman who maintains his website from USA; B is a resident of India. B buys goods of A, online and requests A to deliver them to his address in India. A, fails to deliver the goods on time, B suffers a heavy loss. B sued A in an American Court, court decided in favor of B orders A to compensate B for the same. B filed a petition in Delhi HC for the enforcement of the same. The Delhi HC will consider the American Judgment as a conclusive as to any matter thereby.

Rem vis-à-vis Personam Jurisdiction

Jurisdiction as Oliver Wendell Holmes said whatever else or more it may mean, is jurisdiction, in its popular sense of authority to apply the law to the acts of men. Ordinarily jurisdiction is exercised over defendants residing or carrying on business or personally working for gain within the territorial jurisdiction of the court. With the growth of e-commerce and commercial activity over the World Wide Web, it has become possible for business to be conducted across the globe without actual presence in every place. The present case, inter alia, involves the question of jurisdiction in such a situation.

In Nearing v. S.S. MV Point Vail, the Court held that a valid in rem maritime claim carries the right to satisfaction from the vessel, since the claim constitutes a lien. By contrast, an in persona maritime claim carries no such right. Process in rem is founded on a right in the thing, and the object of the process is to obtain the thing itself, or a satisfaction out of it, for some claim resting on a real or quasi proprietary right in it.

The phrase in rem denotes the compass, and not the subject of the right. It denotes that the right in question avails against persons generally; and not that the right in question is a right over a thing… The phrase in personam is an elliptical or abridged expression for "in personam certam sive determination". Like the phrase in rem, it denotes the compass of the right. It denotes that the right avails exclusively against a determinate person or against determinate persons.

Personam Jurisdiction

Personal jurisdiction as distinguished from subject matter jurisdiction is the power of the court to require a party (usually the defendant) or a witness to come

before the court. States have enacted long arm statutes by which courts can exercise jurisdiction over a business entity or individual located outside the state if for example such entity or individual regularly does business in the state or transacted business with the plaintiff in the state. Personal jurisdiction over non-residents is however limited by the constitutional requirements of due process. A defendant not served with process within the state in which the court sits must have sufficient level of business or personal contacts within the state so that the defendant can reasonably be expected to be sued there.

Example: A, a non-resident, is a tradesman offers numerous goods via a website, server located in USA; B is a resident of India. B buys goods of A, online and requests A to deliver them to his address in India.

A, fails to deliver the goods on time, B suffers a heavy loss. B has all right to sue A in Indian Courts. The expressions personal jurisdiction, in personam and in personam jurisdiction are defined as under:

a. In personam against the person means an action seeking judgment against a person involving his personal rights and based on jurisdiction of his person, as distinguished from a judgment against property (i.e. in rem). It is a type of jurisdiction or power which a court may acquire over the defendant himself in contrast to jurisdiction over his property.

b. In personam jurisdiction the power which a court has over the defendant himself in contrast to the courts power over the defendants interest in property (quasi in rem) or power over the property itself (in rem). A court which lacks personal jurisdiction is without power to issue an in personam judgment.

The Apex Court in Mode Entertainment Network and an v. W.S.G. Cricket Pvt. Ltd.[11] held t the courts in India have power to issue anti-suit injunction to a party over whom it has personal jurisdiction, in an appropriate case. This is because courts of equity exercise jurisdiction in personam. However, having regard to the rule of comity, this power will be exercised sparingly because such an injunction though directed against a person, in effect causes interference in the exercise of jurisdiction by another court.

[11] AIR 2003 SC 1177

From the above discussion the following principles emerge:-

1.

I

n exercising discretion to grant an anti-suit injunction the court must be satisfied of the following aspects:

(a) the defendant, against whom injunction is sought, is amenable to the personal jurisdiction of the court;

(b) if the injunction is declined, the ends of justice will be defeated and injustice will be perpetuated; and

(c) the principle of comity respect for the court in which the commencement or continuance of action/proceeding is sought to be restrained must be borne in mind.

2.

I

n a case where more forums than one are available, the court in exercise of its discretion to grant anti-suit injunction will examine as to which is the appropriate forum (forum convenient) having regard to the convenience of the parties and may grant anti-suit injunction in regard to proceedings which are oppressive or vexatious or in a forum non-convenient.

Purposeful An ailment Test

The 'Purposeful An ailment Test' has been used whether a company can be sued in a specific jurisdiction in the case of Internet companies. Courts specifically look at three factors-

1. a ailment of a company to another jurisdiction
2. whether the act was done in another jurisdiction and
3. whether the jurisdiction is reasonable for the defendant to be expected to defend himself there.

Example: The B.C. Court of Appeal decision in BrainTech v. Kostiuk gives us some idea of when a court will enforce the judgment of another jurisdiction. Kostiuk was alleged to have used the Internet to transmit and publish defamatory information about BrainTech. BrainTech obtained a default judgment in a District Court in Texas against Kotuku and then commenced an action on this judgment in the Supreme Court of British Columbia. After a summary trial BrainTech obtained a favorable judgment which was appealed. It is interesting to

note that the Texas Court took jurisdiction despite the tenuous link to that State, it is also worth noting that had there been a real and substantial connection with Texas, under Canada's Morguard rule that provides for deference for foreign judgments, and the B.C. court would have enforced the judgment of the Texas Court.

3.5 Summary

Jurisdiction issue is a major factor while doing e-commerce through internet without any geographical or national boundary. With the internet, the question of 'territorial' jurisdiction gets complicated largely on account of the fact that the internet is borderless. Therefore, while there are no borders between one region and the other within a country there are no borders even between countries. In every territory consumers are protected through their own territorial law. It means that one nation law is applicable within the boundary of that nation only. In e-commerce doing business is not limited to one nation only; it can sometime be doing business in two different territories. In such a situation the degree of consumer protection in e-commerce comes into picture. It can be solved by entering into a bilateral agreement with the countries around the globe with regard to settling the disputes. With regards to a situation where the parties to an electronic contracts are from different countries, the court will apply the law of that country which has the closest and most substantial connection to the contract, unless there is no express mentioning regarding the governing law. This concept is introduced in order to protect the consumers.

3.6 Self-Assessment Test

1. What do you understand by 'Jurisdiction'? Discuss the Jurisdiction Issues of E-commerce at international level.
2. Discuss the Indian position regarding jurisdiction of E-commerce.
3. State the provisions under the Information Technology Act, 2000 statutes relating to jurisdiction of e-commerce.
4. What is meant by Purposeful Availment Test?
5. What do you understand by Personam Jurisdiction?

3.7 Suggested Readings

- Vakul Sharma, "Information Technology: Law and Practice"
- Chetan Karnatak, "Cyberspace: Jurisdictional Issues of E-commerce and Consumer Protection"
- Teresa Rodríguez de las Heras Ballell, "Applicable Law and Jurisdiction in Electronic Contracts"
- Nishith Desai Associate "E-Commerce in India"
- Rohas Nagpal, "Electronic Contracts & the Indian Law"
- Sachin Mishra, "Determining Jurisdiction over E-Commerce disputes in India"

Unit-4:
UNCITRAL: Model Law of E-Commerce

Objectives:

After going through this Unit you should be able to understand:

- UNCITRAL and its background
- Objects of UNCITRAL modal law of e-commerce
- Important provisions of UNCITRAL modal law of e-commerce

Structure:

4.1 Introduction
4.2 Historical background UNCITRAL Modal Law of E-commerce
4.3 Objects of UNCITRAL Model Law
4.4 Main provisions of Model Law on UNCITRAL
4.5 Summary
4.6 Self-Assessment Test
4.7 Suggested Readings

4.1 Introduction

The United Nations Commission on International Trade Law (UNCITRAL) was established by the United Nations General Assembly by its Resolution 2205 (XXI) of 17 December 1966 to promote the progressive harmonization and unification of international trade law.

The Commission is composed of 36 Member States elected by the General Assembly, are chosen to represent the world's various geographic regions and its principle economic and legal systems. Members are elected for terms of six years, with the terms of half the members expiring every three years. The UNCITRAL secretariat is located in Vienna and carries out its work in annual sessions, which

are held in alternate years in New York and Vienna. All States and interested international organizations are invited to attend as observers and participate in sessions of the Commission and of its working groups.

UNCITRAL focuses on law reform and creating model commercial laws that are both accessible and predictable. This is accomplished through:

- Coordinating the work of organizations active and encouraging cooperation among them.
- Promoting wider participation in existing international conventions and wider acceptance of existing model and uniform laws.
- Preparing or promoting the adoption of new international conventions, model laws and uniform laws and promoting the codification and wider acceptance of international trade terms, provisions, customs and practice, in collaboration, where appropriate, with the organizations operating in this field.
- Promoting ways and means of ensuring a uniform interpretation and application of international conventions and uniform laws in the field of the law of international trade.
- Collecting and disseminating information on national legislation and modern legal developments, including case law, in the field of the law of international trade.
- Establishing and maintaining a close collaboration with the UN Conference on Trade and development.
- Maintaining liaison with other UN organs and specialized agencies concerned with international trade.

The Commission has established six working groups to perform the substantive preparatory work on a range of topics, including: international sale of goods; international transport of goods; international commercial arbitration; public procurement and infrastructure development; construction contracts; international payments; cross-border insolvency and, most important for current purposes, electronic commerce.

UNCITRAL Modal Law

The Model Law is designed to assist States in reforming and modernizing their laws on arbitral procedure so as to take into account the particular features

and needs of international commercial arbitration. It covers all stages of the arbitral process from the arbitration agreement, the composition and jurisdiction of the arbitral tribunal and the extent of court intervention through to the recognition and enforcement of the arbitral award. It reflects worldwide consensus on key aspects of international arbitration practice having been accepted by States of all regions and the different legal or economic systems of the world.

4.2 Historical Background

The decision by UNCITRAL to formulate model legislation on electronic commerce was taken in response to the fact that in a number of countries the existing legislation governing communication and storage of information is inadequate or outdated because it does not contemplate the use of electronic commerce. The lack of legislation in many countries in dealing with E-commerce as a whole results in uncertainty as to the legal nature and validity of information presented in a form other than a traditional paper document. Inadequate legislation at the national level will inevitably create obstacles to international trade. The purpose of Model law was to offer National legislators a set of internationally accepted rules as to how a number of such legal obstacles may be removed, and how a more secure legal environment may be created for what has become known as electronic commerce. The Model law seeks to permit States to adapt their domestic legislation to developments in communications technology applicable to trade law without necessitating the wholesale removal of the paper-based requirements themselves or disturbing the legal concepts and approaches underlying those requirements. The Model law thus relies, on a new approach known as the 'functional equivalent' approach which is based on an analysis of the purposes and functions of the traditional paper-based requirement with a view of determining how those purposes or functions could be fulfilled through electronic commerce techniques. The Drafters of the Model law had considered the impracticability of enacting its entire text as a single statute in all countries. Depending upon the situation in each enacting State, the Model law could be implemented in various ways: either as a single statute or in several pieces of legislation.

The Model Law was prepared in response to a major change in the means by which communications are made between parties using computerized or other

modern techniques in doing business (sometimes referred to as “trading partners”). The Model Law is intended to serve as a model to countries for the evaluation and modernization of certain aspects of their laws and practices in the field of commercial relationships involving the use of computerized or other modern communication techniques, and for the establishment of relevant legislation where none presently exists. The text of the Model Law, as reproduced above, is set forth in annex I to the report of UNCITRAL on the work of its twenty-ninth session.

The Commission, at its seventeenth session (1984), considered a report of the Secretary-General entitled “Legal aspects of automatic data processing”, which identified several legal issues relating to the legal value of computer records, the requirement of a “writing”, authentication, general conditions, liability and bills of lading. The Commission took note of a report of the Working Party on Facilitation of International Trade Procedures, which is jointly sponsored by the Economic Commission for Europe and the United Nations Conference on Trade and Development, and is responsible for the development of UN/EDIFACT standard messages. That report suggested that, since the legal problems arising in this field were essentially those of international trade law, the Commission as the core legal body in the field of international trade law appeared to be the appropriate central forum to undertake and coordinate the necessary action. The Commission decided to place the subject of the legal implications of automatic data processing to the flow of international trade on its programme of work as a priority item.

At its twenty-ninth session, the Working Group discussed the draft Guide to Enactment of the Model Law (hereinafter referred to as “the draft Guide”) as set forth in a note prepared by the Secretariat. The Secretariat was requested to prepare a revised version of the draft Guide reflecting the decisions made by the Working Group and taking into account the various views, suggestions and concerns that had been expressed at that session. At its twenty-eighth session, the Commission placed the draft Guide to Enactment of the Model Law on the agenda of its twenty-ninth session. At its twenty-ninth session (1996), the Commission, after consideration of the text of the draft Model Law as revised by the drafting group, adopted the following decision at its 605th meeting, on 12 June 1996

An important concern of many countries is that traditional legal frameworks may prove to be a barrier to increased global electronic trade. As early as 1985, UNCITRAL and the United Nations General Assembly called upon all

Governments to review legal requirements for a handwritten signature or other paper-based requirements for trade-related documents in order to permit, where appropriate, the use of electronic technologies.3 States were slow to respond, and UNCITRAL ultimately concluded that paper-based requirements combined with the lack of harmonization in the rules applicable to electronic commerce constituted a substantial barrier to international trade, and that uniform rules for electronic commerce were necessary.

In 1992, UNCITRAL embarked upon the preparation of legal of the subject and give its final approval to the resulting Model Law on Electronic Commerce, which was eventually adopted by the General Assembly in December 1996. The Model Law has proved a great success, as a basis for national law reform initiatives, as well as for encouraging similar initiatives in other intergovernmental forums.

4.3 Objects of UNCITRAL

The main objective of the UNCITRAL Model Law was to offer national legislators a set of internationally acceptable rules allowing a number of legal obstacles to be removed and a more secure legal environment to be created for electronic commerce. The UNCITRAL Model Law is not an international treaty and does not therefore constitute positive law. Instead, it was drafted to provide a guide for individual countries in preparing their own national legislative response. National legislators and policymakers are not required to adopt in its entirety the UNCITRAL Model Law. Instead, national legislatures may modify it to meet concrete needs or concerns of their jurisdiction. This flexibility fosters the adoption of the core provisions of the UNCITRAL Model Law, which promotes the development of an international system of national electronic contracting legislation that, although not identical, is similar in structure and content.

The use of modern means of communication such as electronic mail and Electronic Data Interchange (EDI) for the conduct of international trade transactions has been increasing rapidly and is expected to develop further as technical supports such as information highways and the Internet become more widely accessible. However, the communication of legally significant information in the form of paperless messages may be hindered by legal obstacles to the use of such messages, or by uncertainty as to their legal effect or validity. The purpose of

the Model Law is to offer national legislators a set of internationally acceptable rules as to how a number of such legal obstacles may be removed, and how a more secure legal environment may be created for what has become known as "electronic commerce". The principles expressed in the Model Law are also intended to be of use to individual users of electronic commerce in the drafting of some of the contractual solutions that might be needed to overcome the legal obstacles to the increased use of electronic commerce.

The decision by UNCITRAL to formulate model legislation on electronic commerce was taken in response to the fact that in a number of countries the existing legislation governing communication and storage of information is inadequate or outdated because it does not contemplate the use of electronic commerce. In certain cases, existing legislation imposes or implies restrictions on the use of modern means of communication, for example by prescribing the use of "written", "signed" or "original" documents. While a few countries have adopted specific provisions to deal with certain aspects of electronic commerce, there exists no legislation dealing with electronic commerce as a whole. This may result in uncertainty as to the legal nature and validity of information presented in a form other than a traditional paper document. Moreover, while sound laws and practices are necessary in all countries where the use of EDI and electronic mail is becoming widespread, this need is also felt in many countries with respect to such communication techniques as telecopy and telex.

The Model Law may also help to remedy disadvantages that stem from the fact that inadequate legislation at the national level creates obstacles to international trade, a significant amount of which is linked to the use of modern communication techniques. Disparities among, and uncertainty about, national legal regimes governing the use of such communication techniques may contribute to limiting the extent to which businesses may access international markets.

At an international level, the Model Law is useful in certain cases as a tool for interpreting existing international conventions and other international instruments that create legal obstacles to the use of electronic commerce, for example by prescribing that certain documents or contractual clauses be made in written form. As between those States parties to such international instruments, the adoption of the Model Law as a rule of interpretation might provide the means to

recognize the use of electronic commerce and obviate the need to negotiate a protocol to the international instrument involved.

The objectives of the Model Law, which include enabling or facilitating the use of electronic commerce and providing equal treatment to users of paper-based documentation and to users of computer based information, are essential for fostering economy and efficiency in international trade. By incorporating the procedures prescribed in the Model Law in its national legislation for those situations where parties opt to use electronic means of communication, an enacting State would create a media-neutral environment

.

4.4 Main provisions of Model Law on UNCITRAL

UNCITRAL was created in 1996 to enhance the use of paperless communication. In 2001, it created a Model Law on Electronic Signatures. Future electronic commerce work will focus on: electronic contracting, with a view to creating a draft convention; online dispute settlement; dematerialization of documents of title; and a convention to remove legal barriers to the development of electronic commerce in international trade instruments.

The Model Law is divided into two parts, one dealing with electronic commerce in general and the other one dealing with electronic commerce in specific areas. Part two of the Model Law, which deals with electronic commerce in specific areas, is composed of a chapter I only, dealing with electronic commerce as it applies to the carriage of goods.

Article 3 is inspired by Article 7 of the United Nations Convention on Contracts for the International Sale of Goods. It is intended to provide guidance for interpretation of the Model Law by courts and other national or local authorities. The expected effect of Article 3 is to limit the extent to which a uniform text, once incorporated in local legislation, would be interpreted only by reference to the concepts of local law.

The purpose of paragraph (1) is to draw the attention of courts and other national authorities to the fact that the provisions of the Model Law (or the provisions of the instrument implementing the Model Law), while enacted as part of domestic legislation and therefore domestic in character, should be interpreted

with reference to its international origin in order to ensure uniformity in the interpretation of the Model Law in various countries.

The decision to undertake the preparation of the Model Law was based on the recognition that, in practice, solutions to the legal difficulties raised by the use of modern means of communication are mostly sought within contracts. The Model Law is thus intended to support the principle of party autonomy. However, that principle is embodied only with respect to the provisions of the Model Law contained in chapter III of part one. The reason for such a limitation is that the provisions contained in chapter II of part one may, to some extent, be regarded as a collection of exceptions to well-established rules regarding the form of legal transactions. Such well-established rules are normally of a mandatory nature since they generally reflect decisions of public policy. An unqualified statement regarding the freedom of parties to derogate from the Model Law might thus be misinterpreted as allowing parties, through a derogation to the Model Law, to derogate from mandatory rules adopted for reasons of public policy. The provisions contained in chapter II of part one should be regarded as stating the minimum acceptable form requirement and are, for that reason, to be regarded as mandatory, unless expressly stated otherwise. The indication that such form requirements are to be regarded as the “minimum acceptable” should not, however, be construed as inviting States to establish requirements stricter than those contained in the Model Law.

Article 4 is intended to apply not only in the context of relationships between originators and addressees of data messages but also in the context of relationships involving intermediaries. Thus, the provisions of chapter III of part one could be varied either by bilateral or multilateral agreements between the parties, or by system rules agreed to by the parties. However, the text expressly limits party autonomy to rights and obligations arising as between parties so as not to suggest any implication as to the rights and obligations of third parties.

The key principle underlying the Model Law is the concept of "electronic equivalence," found in Article 5. Although the Model Law does not deem electronic communications valid (just as with paper documents, legal validity depends upon more than a document's form), it provides that information or documents will not be denied legal effect or enforceability solely because they are in electronic format. Article 5 embodies the fundamental principle that data

messages should not be discriminated against, i.e., that there should be no disparity of treatment between data messages and paper documents. It is intended to apply notwithstanding any statutory requirements for a “writing” or an original. That fundamental principle is intended to find general application and its scope should not be limited to evidence or other matters covered in chapter II. It should be noted, however, that such a principle is not intended to override any of the requirements contained in Articles 6 to 10. By stating that “information shall not be denied legal effectiveness, validity or enforceability solely on the grounds that it is in the form of a data message”, Article 5 merely indicates that the form in which certain information is presented or retained cannot be used as the only reason for which that information would be denied legal effectiveness, validity or enforceability. However, Article 5 should not be misinterpreted as establishing the legal validity of any given data message or of any information contained

A series of functional equivalency rules specify what conditions must be met for an electronic communication to constitute a legally effective substitute for a conventional, paper-based communication. For example, Article 6 provides that a legal requirement to provide information or a document sent "in writing" is satisfied by its electronic equivalent if it is in a form that can be subsequently accessed and used by the recipient.

Article 7 is based on the recognition of the functions of a signature in a paper-based environment. In the preparation of the Model Law, the following functions of a signature were considered:

- to identify a person;
- to provide certainty as to the personal involvement of that person in the act of signing;
- To associate that person with the content of a document.

It was noted that a signature could perform a variety of functions, depending on the nature of the document that was signed. For example, a signature might attest to the intent of a party to be bound by the content of a signed contract; the intent of a person to endorse authorship of a text; the intent of a person to associate itself with the content of a document written by someone else; the fact that, and the time when, a person had been at a given place.

Article 8 states that electronic documents will satisfy a legal requirement for "original" documents if there is a reliable assurance as to the integrity of the information and that the information is capable of being displayed to the person to whom it is to be presented. The question of whether an assurance is reliable is to be determined in the light of all the circumstances, including the purpose for which the document was created.

Article 8 also addresses this issue. It provides that the criteria for assessing integrity shall be whether the information has remained complete and unaltered, apart from the addition of any endorsement and any change that arises in the normal course of communication, storage and display.

Article 9 creates an electronic equivalence standard for evidentiary purposes as it provides that evidentiary rules shall not deny the admissibility of an electronic communication solely on the grounds that it is in electronic form. The purpose of Article 9 is to establish both the admissibility of data messages as evidence in legal proceedings and their evidential value. With respect to admissibility, paragraph (1), establishing that data messages should not be denied admissibility as evidence in legal proceedings on the sole ground that they are in electronic form, puts emphasis on the general principle stated in Article 4 and is needed to make it expressly applicable to admissibility of evidence, an area in which particularly complex issues might arise in certain jurisdictions. The term “best evidence” is a term understood in, and necessary for, certain common law jurisdictions. However, the notion of “best evidence” could raise a great deal of uncertainty in legal systems in which such a rule is unknown. States in which the term would be regarded as meaningless and potentially misleading may wish to enact the Model Law without the reference to the “best evidence” rule contained in paragraph (1). 71. As regards the assessment of the evidential weight of a data message, paragraph (2) provides useful guidance as to how the evidential value of data messages should be assessed (e.g., depending on whether they were generated, stored or communicated in a reliable manner).

Article 10 addresses the issue of data retention. It provides that data retention requirements are met where the information contained with the electronic message is accessible so as to be usable for subsequent reference, the message itself is retained in the format in which it was generated and any information indicating origin, destination, date and time of the message is retained.

The most interesting section of the Model Law focuses on online contracts. Although thousands of contracts are entered into daily through the Internet, some sellers and consumers remain uncertain of the legal implications of clicking the "I agree" button on a website. Article Eleven of the Model Law removes any doubt that this popular form of online consent is valid by stipulating that unless the parties agree otherwise, an offer or acceptance of an offer can be expressed in electronic form. Article 11 is not intended to interfere with the law on formation of contracts but rather to promote international trade by providing increased legal certainty as to the conclusion of contracts by electronic means. It deals not only with the issue of contract formation but also with the form in which an offer and an acceptance may be expressed. In certain countries, a provision along the lines of paragraph (1) might be regarded as merely stating the obvious, namely that an offer and an acceptance, as any other expression of will, can be communicated by any means, including data messages. However, the provision is needed in view of the remaining uncertainties in a considerable number of countries as to whether contracts can validly be concluded by electronic means. Such uncertainties may stem from the fact that, in certain cases, the data messages expressing offer and acceptance are generated by computers without immediate human intervention, thus raising doubts as to the expression of intent by the parties. Another reason for such uncertainties is inherent in the mode of communication and results from the absence of a paper document.

Article 12 was added at a late stage in the preparation of the Model Law, in recognition of the fact that Article 11 was limited to dealing with data messages that were geared to the conclusion of a contract, but that the draft Model Law did not contain specific provisions on data messages that related not to the conclusion of contracts but to the performance of contractual obligations (e.g., notice of defective goods, an offer to pay, notice of place where a contract would be performed, recognition of debt). Since modern means of communication are used in a context of legal uncertainty, in the absence of specific legislation in most countries, it was felt appropriate for the Model Law not only to establish the general principle that the use of electronic communication should not be discriminated against, as expressed in Article 5, but also to include specific illustrations of that principle. Contract formation is but one of the areas where such an illustration is useful and the legal validity of unilateral expressions of will, as

well as other notices or statements that may be issued in the form of data messages, also needs to be mentioned.

Article 13 has its origin in Article 5 of the UNCITRAL Model Law on International Credit Transfers, which defines the obligations of the sender of a payment order. Article 13 is intended to apply where there is a question as to whether a data message was really sent by the person who is indicated as being the originator. In the case of a paper based communication the problem would arise as the result of an alleged forged signature of the purported originator. In an electronic environment, an unauthorized person may have sent the message but the authentication by code, encryption or the like would be accurate. The purpose of Article 13 is not to assign responsibility. It deals rather with attribution of data messages by establishing a presumption that under certain circumstances a data message would be considered as a message of the originator, and goes on to qualify that presumption in case the addressee knew or ought to have known that the data message was not that of the originator.

The use of functional acknowledgements is a business decision to be made by users of electronic commerce; the Model Law does not intend to impose the use of any such procedure. However, taking into account the commercial value of a system of acknowledgement of receipt and the widespread use of such systems in the context of electronic commerce, it was felt that the Model Law should address a number of legal issues arising from the use of acknowledgement procedures. Notion of "acknowledgement" is sometimes used to cover a variety of procedures, ranging from a mere acknowledgement of receipt of an unspecified message to an expression of agreement with the content of a specific data message. In many instances, the procedure of "acknowledgement" would parallel the system known as "return receipt requested" in postal systems. Acknowledgements of receipt may be required in a variety of instruments, e.g., in the data message itself, in bilateral or multilateral communication agreements, or in "system rules". The provisions of Article 14 are based on the assumption that acknowledgement procedures are to be used at the discretion of the originator. Article 14 is not intended to deal with the legal consequences that may flow from sending an acknowledgement of receipt, apart from establishing receipt of the data message. For example, where an originator sends an offer in a data message and requests acknowledgement of receipt, the acknowledgement of receipt simply evidences that the offer has been

received. Whether or not sending that acknowledgement amounted to accepting the offer is not dealt with by the Model Law but by contract law outside the Model Law.

Article 15 provides for Time and place of dispatch and receipt of data messages. Articles 16 and 17 of the Model Law deal with electronic commerce in specific areas dealing with electronic commerce as it applies to the carriage of goods.

"Functional-equivalent" Approach

The Model Law is based on the recognition that legal requirements prescribing the use of traditional paper-based documentation constitute the main obstacle to the development of modern means of communication. In the preparation of the Model Law, consideration was given to the possibility of dealing with impediments to the use of electronic commerce posed by such requirements in national laws by way of an extension of the scope of such notions as "writing", "signature" and "original", with a view to encompassing computer-based techniques. Such an approach is used in a number of existing legal instruments, e.g., Article 7 of the UNCITRAL Model Law on International Commercial Arbitration and Article 13 of the United Nations Convention on Contracts for the International Sale of Goods. It was observed that the Model Law should permit States to adapt their domestic legislation to developments in communications technology applicable to trade law without necessitating the wholesale removal of the paper-based requirements themselves or disturbing the legal concepts and approaches underlying those requirements. At the same time, it was said that the electronic fulfillment of writing requirements might in some cases necessitate the development of new rules. This was due to one of many distinctions between EDI messages and paper based documents, namely, that the latter were readable by the human eye, while the former were not so readable unless reduced to paper or displayed on a screen.

The Model Law thus relies on a new approach, as the "functional equivalent approach", which is based on an analysis of the purposes and functions of the traditional paper-based requirement with a view to determining how those purposes or functions could be fulfilled through electronic-commerce techniques. For example, among the functions served by a paper document are the following:

to provide that a document would be legible by all; to provide that a document would remain unaltered over time; to allow for the reproduction of a document so that each party would hold a copy of the same data; to allow for the authentication of data by means of a signature; and to provide that a document would be in a form acceptable to public authorities and courts. It should be noted that in respect of all of the above-mentioned functions of paper, electronic records can provide the same level of security as paper and, in most cases, a much higher degree of reliability and speed, especially with respect to the identification of the source and content of the data, provided that a number of technical and legal requirements are met. However, the adoption of the functional-equivalent approach should not result in imposing on users of electronic commerce more stringent standards of security (and the related costs) than in a paper-based environment.

A data message, in and of itself, cannot be regarded as an equivalent of a paper document in that it is of a different nature and does not necessarily perform all conceivable functions of a paper document. That is why the Model Law adopted a flexible standard, taking into account the various layers of existing requirements in a paper-based environment: when adopting the "functional-equivalent" approach, attention was given to the existing hierarchy of form requirements, which provides distinct levels of reliability, traceability and inalterability with respect to paper-based documents. For example, the requirement that data be presented in written form (which constitutes a "threshold requirement") is not to be confused with more stringent requirements such as "signed writing", "signed original" or "authenticated legal act".

The Model Law does not attempt to define a computer-based equivalent to any kind of paper document. Instead, it singles out basic functions of paper-based form requirements, with a view to providing criteria which, once they are met by data messages, enable such data messages to enjoy the same level of legal recognition as corresponding paper documents performing the same function. The functional-equivalent approach has been taken in Articles 6 to 8 of the Model Law with respect to the concepts of "writing", "signature" and "original" but not with respect to other legal concepts dealt with in the Model Law. For example, Article 10 does not attempt to create a functional equivalent of existing storage requirements.

4.5 Summary

The Model Law on Electronic Commerce purports to enable and facilitate commerce conducted using electronic means by providing national legislators with a set of internationally acceptable rules aimed at removing legal obstacles and increasing legal predictability for electronic commerce. In particular, it is intended to overcome obstacles arising from statutory provisions that may not be varied contractually by providing equal treatment to paper-based and electronic information. Such equal treatment is essential for enabling the use of paperless communication, thus fostering efficiency in international trade.

Besides formulating the legal notions of non-discrimination, technological neutrality and functional equivalence, the Model Law establishes rules for the formation and validity of contracts concluded by electronic means, for the attribution of data messages, for the acknowledgement of receipt and for determining the time and place of dispatch and receipt of data messages.

4.6 Self-Assessment Test

1. State the objects of United Nations Commission on International Trade Law (UNCITRAL).
2. Discuss the salient provision of modal law of UNCITRAL.
3. What do you understand by "Functional-equivalent" Approach and what is its importance?
4. Discuss the provisions under the model law of UNCITRAL regarding the online contract.
5. Discuss the historical background of modal law of UNCITRAL.

4.7 Suggested Readings

1. "UNCITRAL Model Law on Electronic Commerce with Guide to Enactment 1996", United Nations Publication
2. "Promoting confidence in electronic commerce: legal Issues on International use of Electronic Authentication and Signature Methods", United Nations Publication
3. C. M. Abhilash, "E-Commerce Law in Developing Countries: An Indian Perspective"

4. Manuel Alba, “Electronic Commerce Provisions in the UNCITRAL Convention on Contracts for the International Carriage of Goods Wholly or Partly by Sea”
5. Paper Presented by Prof. Dr. Rahmat Mohamad, Secretary-General of AALCO on “International Law on E-Commerce: Legal Issues and Impact on the Developing Countries”
6. Ravi Kalakota, “Frontiers of E-commerce”

Unit- 5.
Electronic Data Interchange

Objectives:

After going through this Unit you should be able to understand:

- Meaning of Electronic Data Interchange
- Various types Electronic Data Interchange
- Benefits of Electronic Data Interchange
- Infrastructure and Various component of Electronic Data Interchange

Structure:

5.1 Introduction
5.2 Meaning of EDI
5.3 Advantages of Electronic Data Interchange:
5.4 Types of EDI System
5.5 Infrastructure for EDI
5.6 Components of EDI System
5.7 Summary
5.8 Self-Assessment Test
5.9 Suggested Readings

5.1
Introduction

Electronic Data Interchange is the exchange of structured business data between separate computer companies, carried out without manual intervention, electronically, by means of standardized messages that replace traditional paper documents.

For several hundred years, commerce has been based upon the movement of written documents. These documents contained the information that one company needed to convey to another company in order to do business. Over a

period of time the documents started to take on standard names such as Invoice, Credit Note and Order. However, the documents were certainly not of any standard layout. They did not need to be because the recipient was always a human being and humans have the ability to read, interpret and rationalise. An invoice document, for example, was that it would contain header information about the parties involved, detail lines about the products, quantities and prices, and finally some totaling information.

In the early 1950s, computers started to be used by large companies for their accounting and payroll needs. Throughout the following decades, computers rapidly took over task after task until they were involved not only in accounting, but in production, administration and all other areas of commerce. But one thing did not change. The computers still produced printed documents in various non-standard formats.

This situation was not too bad for those sending a document but was much worse for the receiver. Many documents must be sent from one company's computer to their trading partner's computer. Computers cannot easily read written documents, and getting them to understand what they have just read is an almost impossible task, so the receiving company would have to employ personnel to re-key the information from the received documents into the company's computer system.

5.2

Meaning of EDI

EDI is the exchange of business or administrative messages (orders, invoices, notifications, billing, and inventory), the computer two or more business partners using agreed standard to structure the transaction or data.

EDI is often defined as the exchange of formatted business transactions in a standard format, from computer to computer between business partners. Business partner usually have different computer systems and business applications, EDI environment standard data formats and protocols to send and receive business documents. The data is formatted with each end to allow for integration into the

established system. Like other models of electronic communication, such as fax and e-mail, EDI allow information is sent over a public or private communication lines.

The many, similar definitions of Electronic Data Interchange (EDI) are succinctly summarized in the following quotation from Emmelhainz (1988): "computer-to-computer transmission of standard business data". A detailed description of what EDI is spelt out in a paper by Brawn (1989), in whose view the essential elements of EDI are:

- direct application-to-application (not merely computer-to-computer) communication;
- the use of an electronic transmission medium (normally a value-added network) rather than magnetic tapes, disks, or other transmission media;
- the use of electronic mail boxes for "store and collect/store and forward" transmission/delivery of documents;
- the use of structured, formatted messages based upon internationally agreed standards (thus enabling messages to be translated, interpreted and checked for compliance to a standard set of rules).
- The term EDI therefore does not refer to:
- electronic mail (which must be read by the recipient and which does not make use of standardised document formats);
- file transfer (which also makes little use of standardised formats and which need have no connection with applications at either end of the transmission); or
- remote data entry (which merely places the entry terminal some distance away from the computer).

EDI system takes information from incoming source through a network address of the seller, and sends them directly to the application to further process the data. This ability to forward information directly to applications makes EDI a powerful tool for business. EDI is defined as the process of communication (computer to computer) business information in standard formats. Electronic commerce is a broad term includes EDI, but also includes interpersonal communication (human to human), Transfer Money, and the sharing of common

databases with added activities and assist in the efficient conduct of business. **Re-engineering tool**

Successful EDI programs begin with an understanding of the mission of the business and a map of the processes and flows which support the firm's goals. Early practitioners of EDI experienced varying degrees of success depending on their level of commitment and the amount of integration they established. The least successful programs sought to mirror the pre-existing paper flows, which EDI replaced. So-called door-to-door EDI in some cases involves nothing more than printing out transactions as they are received to produce a paper input form for a keypunch operator.

How EDI Works

During EDI, information is sent from one participant's computer system and translated to a standard format with special translation software. It is then transmitted to another participant, translated back from the standard format into a format used by the receiver and entered into the receiver's computer system. Thus, EDI allows participants to transfer information between their respective computer systems, even if the systems utilize different, incompatible platforms.

Before using EDI, companies usually enter into specific agreements with their trading partners (called trading partner agreements or TPAs). These contracts often spell out the kinds of information they will exchange and how they will exchange it. Because entering into and terminating TPAs is expensive and time consuming, traditional EDI isn't always ideal for companies who change suppliers often, or for companies who frequently enter into temporary relationships with suppliers or other companies.

5.3 Advantages of Electronic Data Interchange

There are some reasons why businesses adopt EDI.

1. Remove document re-keying

By removing the manual keying of key business documents such as Orders, Invoices, Acknowledgments and Dispatch Notes your company can benefit significantly by:

- Reduced labour costs
- Elimination of human keying errors
- Faster document processing
- Instant document retrieval
- Remove reliance on the postal service

2. E

liminate Paper

EDI eliminates the need for most paperwork, helping the environment. Paper-based trading relationships have some inherent disadvantages when compared with their electronic trading equivalents:

- Stationery and printer consumable costs
- Document storage costs
- Lost documents
- Postage costs

3. R

educe lead times and stockholding

- Electronic trading documents can be delivered far more quickly than their paper counterparts, thus the turnaround time from order to delivery can be reduced.
- By using EDI for forecasting and planning, companies are able to get forward warning of likely orders and to plan their production and stock levels accordingly.
- Companies receiving advanced shipping notes or acknowledgments know in advance what is actually going to be delivered, and are made aware of shortages so alternate supplies can be sourced.
- Integrating electronic documents means they can be processed much faster, again reducing lead times and speeding up payments.

4. I

ncrease quality of the trading relationship

Improved communication between employees and branches, due to the use of standardised document and data formats.

- Electronic trading documents when printed are much easier to read than copies faxed or generated on multi-part stationery by impact printers.
- Accurate documents help ensure accurate supplies.
- Batches of electronic documents are usually sequentially numbered; therefore missing documents can easily be identified, not causing companies to wade through piles of paper.

5.

Competitive Edge

Because electronic data interchange (EDI) makes you attractive to deal with from your customers' point of view, and you are in their eyes cheaper and more efficient to deal with than a competitor trading on paper, your costs will be lower because you will require less manpower to process orders, deliveries or payments. EDI is one of ways for crossing the "paperless society". Submission of business documents is done in seconds instead of several days, and reduces the possibility that such documents are lost or be corrupted. Unlike other types of electronic communication, EDI allows the computer to process the information received, thus eliminating the task of rewriting and the possible errors when retyping.

6. A

ccuracy

Information that passes directly between computers without having to be re-entered eliminates the chance of data entry errors. There is almost no chance that the receiving computer will invert digits or add an extra digit.

7. E

conomy

The cost of sending an electronic document is not a great deal more than regular first class postage. Add to that the reductions in cost afforded by eliminating the re-keying of data, human handling, routing, and delivery. The net result is a substantial reduction in the cost of a transaction.

Disadvantages:

- Systems need continual electronic protection, from viruses, hacking and potential fraud.
- EDI systems need regular software updates.

- In case of a systems failure, manual systems must also be in place to ensure that business continues.
- Staff must receive training, every time the EDI system is updated. This is a continuous investment.
- Companies relying on EDI must invest in backup systems, in case the primary system fails.
- Human input error is still potentially a problem, although the software being used should highlight most errors.
- Data Protection Laws, protecting customers and employees, must be applied and adhered to by employees and the company.
- EDI systems are extremely expensive making it difficult for small businesses to implement.
- Many large organizations will only work with others who utilize EDI. This may limit the business small companies are able to do with such organizations and limit trading partners.
- There are various standards bodies who have developed 'standard document formats' for EDI which can cause problems with cross compatibility.
- These standards bodies also push standards revisions annually which could cause problems if you have a more recent version of a document than a business partner.

5.4 Types of EDI System

EDI systems generally can be divided in three categories[12]

1. **One-to-Many Systems**:

These systems typically arise when a (large) organization wishes to streamline its interactions with suppliers (or customers). The initiating organization is the hub of the system, while its trading partners form the satellites.

2. **Many-to-Many or "Clearing House" Systems**:

[12] Akerman and Cafiero, 1985

A more general form in which there is no single hub but, apparently, many buyers and sellers interacting with each other. Notionally, the system itself forms the hub and all parties are satellites. The development of a system of this type is usually driven by two organisations, each representing an industry group. In a sense, these systems can be considered as one-to-one systems connecting the buyer industry group with the supplier industry group. Akerman and Cafiero do not carry this idea further, although it is an easy task to extend this concept to allow for the participation of any number of industry groups, each of which may be either supplier or customer.

3. "

Incremental Paper Trail" Systems:

Where documents are amended by a series of participants with additional information being added to the document at each stage in the process, are particularly relevant to the domestic and international trading community. Schemes of this type allow the progress of a shipment from exporter to importer to be covered by a single electronic document, to which each party merely adds the appropriate information, obviating the need for bulky and unmanageable documents such as bills of lading or ships' manifests.

5.5Infrastructure for EDI

Several elements of infrastructure must exist in order to introduce an EDI system, including:

A. format standards to facilitate automated processing by all users,
B. translation software to translate from a user's proprietary format for internal data storage into the generic external format and back again,
C. value-added networks to solve the technical problems of sending information between computers,
D. inexpensive microcomputers to bring all potential users—even small ones—into the market, and
E. procedures for complying with legal rules. It has only been in the past several years that all of these ingredients have fallen into place.

A. Format Standards

To permit the efficient use of computers, information must be highly organized into a consistent data format. A format defines how information in a message is organized: what data goes where, what data is mandatory, what is optional, how many characters are permitted for each data field, how data fields are ordered, and what codes or abbreviations are permitted.

Early EDI efforts in the 1960s used proprietary formats developed by one firm for exclusive use by its trading partners. This worked well until a firm wanted to exchange EDI documents with other firms who wanted to use their own formats. Since the different formats were not compatible, data exchange was difficult if not impossible. To facilitate the widespread use of EDI, standard formats were developed so that an electronic message sent by one party could be understood by any receiver that subscribes to that format standard. In the United States the Transportation Data Coordinating Committee began in 1968 to design format standards for transportation documents. The first document was approved in 1975. This group pioneered the ideas that are used by all standards organizations today.

North American standards are currently developed and maintained by a volunteer organization called ANSI (American National Standards Institute). The format for a document defined by ANSI is broad enough to satisfy the needs of many different industries. Electronic documents are typically of variable length and most of the information is optional. When a firm sends a standard EDI purchase order to another firm, it is possible for the receiving firm to pass the purchase order data through an EDI translation program directly to a business application without manual intervention. In the late 1990s, international format standards were established and introduced as well to facilitate international business activity.

B. Translation Software

Translation software makes EDI work by translating data from the sending firm's internal format into a generic EDI format. Translation software also receives a sender's EDI message and translates it from the generic standard into the receiver's internal format. There are currently translation software packages for almost all types of computers and operating systems.

C. Value-Added Networks (VANS)

When firms first began using EDI, most communications of EDI documents were directly between trading partners. Unfortunately, direct computer-to-computer communications requires that both firms :

1) use similar communication protocols,
2) have the same transmission speed,
3) have phone lines available at the same time, and
4) have compatible computer hardware.

If these conditions are not met, then communication becomes difficult if not impossible. A value-added network (VAN) can solve these problems by providing an electronic mailbox service. By using a VAN, an EDI sender need only learn to send and receive messages to or from one party: the VAN. Since a VAN provides a very flexible computer interface, it can talk to virtually any type of computer. This means that to conduct EDI with hundreds of trading partners, an organization only has to talk to one party. In addition, VANs provide important security elements for dissemination of information between parties.

D. Inexpensive Computers

The fourth building block of EDI is inexpensive computers that permit even small firms to implement EDI. Since microcomputers are now so prevalent, it is possible for firms of all sizes to deal with each other using EDI.

E. Procedures for Complying with Legal Rules

Legal rules apply to the documents that accompany a wide variety of business transactions. For example, some contracts must include a signature or must be an original in order to be legal. If documents are to be transmitted via EDI, companies must establish procedures to verify that messages are authentic and that they comply with the agreed-upon protocol. In addition, EDI requires companies to institute error-checking procedures as well as security measures to prevent unauthorized use of their computer systems. Still, it is important to note that some sorts of business documents—such as warranties or limitations of liability—are difficult to transmit legally using EDI.

5.6 Components of EDI System

An EDI system consists of all the components necessary to exchange EDI transactions with the EDI capable trading partners. The following components and tools are necessary for performing EDI:

1**. EDI Standards**

Different industries have developed their own EDI standards. The EDI standards are designed to be independent of communication and software technology. The EDI standard provides details about a particular document like, which piece of information is mandatory for that document and which is optional. It also provides the rules for the structure of the document. Two different EDI documents can follow the same standard and contain different sets of information. EDI standards help EDI by:

(a) Providing rules of syntax
(b) Defining the data organization
(c) Providing editing rules and conventions
(d) Making available published public documentation

The four major types of EDI standards are:

(a) UN/EDIFACT standard is the only international standard. This standard is predominant outside of North America.
(b) ANSI ASC×12 standard is predominant in North America.
(c) TRADACOMS standard is predominant in the UK retail industry.
(d) ODETTE standard is used in the European automotive industry.

2. EDI Translation Management Software

EDI transactions are very difficult to read and manipulate. With the help of EDI translation management software, EDI data is translated into a file format which acts as an interface with a company's in-house systems. It also helps to translate the EDI data into the forms that can be used by the users. EDI translation software also supports the development and maintenance of maps. Maps are required to handle each transaction type. Each transaction type with individual partner is formatted differently with the help of a map. It translates the EDI transaction into a useable file format.

3. EDI Guides

EDI trading partners provide EDI guides to communicate about the formatting style of the transaction type. There must be a similarity between the EDI guide and the EDI complaint made with a particular EDI partner. The EDI

guides must be similar in order to be compliant with a particular EDI partner. The EDI guides are generally used to develop maps.

4. Hardware

Hardware is needed to run EDI translation software. The computer hardware must be sufficiently powerful and reliable to support the exchange of EDI transactions in compliance with trading partners' transmission schedules all the time.

5. Communication Network

A direct communication link is required to send and receive EDI transactions. Some trading partners offer a direct connection to their EDI computer using a direct AS/2 connection. Trading partners can elect this method of communication instead of using a third party network provider which is a communications intermediary with other trading partners which is called VAN.

6. Inexpensive Microcomputer

Inexpensive microcomputers are required to bring all potential users into the market. It permits even small firms to implement EDI. Since microcomputers are now easily available, it has become easy for all the firms to deal with each other using EDI maps.

7. EDI Experienced Personnel

EDI experienced personnel are required to implement each of the EDI system components and to maintain the specific data for a company's EDI trading partners.

5.7 Summary

- EDI is an important subset of e-commerce. It is a system which allows structured transmission of data between businesses, government's structures and other entities by electronic means.
- For statistical purposes, the U.S. Census Bureau defines e-commerce as the value of goods and services sold online whether over open networks like Internet, or over proprietary networks running systems like EDI.
- An EDI message can be easily translated into various formats which are suitable for application software right from controlling the production in a factory to giving future orders to the retailers.

- The VAN works as a clearing house for electronic transactions. It serves as a private electronic mail service.
- The EDI standard provides details about a particular document like which piece of information is mandatory for that document and which piece is optional. It also provides the rules for the structure of the document.
- With the help of the EDI translation management software EDI data can be translated into a file format which can be an interface with a company's in-house systems.
- The EDI transmission utilizes various software and systems to allow transmission. The content of an EDI transmission can be one electronic document, or it can be more than one electronic document.
- United Nations/Electronic Data Interchange for Administration, Commerce and Transport (UN/EDIFACT) is the International EDI standard.
- EDIFACT consists of a hierarchical structure where the top level is referred to as an interchange structure, and bottom levels contain multiple messages.

5.8 Self-Assessment Test

1. What is meant by Electronic Data Interchange? What are the advantages of EDI?
2. State the essential elements of Electronic Data Interchange.
3. State the various components of Electronic Data Interchange.
4. Discuss the different types of Electronic Data Interchange.
5. Explain the Infrastructure for Electronic Data Interchange.

5.9 Suggested Readings

- "Electronic Data Interchange and Paperless Processing: *Issues and Challenges",* Department of Health and Human Services
- Paula M.C. Swatman , "Electronic Data Interchange: Organisational Opportunity, Not Technical Problem"
- "EDI E-Commerce", Training Guide of QAD

- Parag Diwan and Sunil Sharma, “E-commerce”
- Nahid Jilovec, “A to Z of EDI and Its Role in E-Commerce”

Unit-6
Digital Signature

Objectives:

After going through this Unit you should be able to understand:

- definition of Digital signature and how it works
- how it is differ from electronic signature and handwriting signature
- legal issues regarding Digital signature

Structure:

6.1 Introduction
6.2Meaning of Digital Signature
6.3 Digital Signature versus Handwritten Signatures
6.4 Electronic Signatures versus Digital Signatures
6.5 How digital signature works
6.6 Digital Signature and Legal Issues
6.7 Digital Signature Certificates (DSC)
6.8 Summary
6.9 Self-Assessment Test
6.10 Suggested Readings

6.1 Introduction

The basic purpose of signing any document/contract is authenticate the document and identify and bind the person who signs (endorser), so that the endorser cannot claim later on that he had not signed a particular document. Digital signature is electronically generated and can be used to make sure the veracity and legitimacy of data. The dawn of information technology revolutionized the whole world, India is not an exception to it; as technological activism is the social behavior in India. The Information Technology Act provides legal recognition to electronic records and digital signatures. As organizations move away from paper documents with ink signatures or authenticity stamps, digital signatures can

provide added assurances of the evidence to provenance, identity, and status of an electronic document as well as acknowledging informed consent and approval by a signatory.

6.2 Meaning of Digital Signature

The Oxford Dictionary defines signature as a 'person's name written in a distinctive way as a form of identification in authorizing a cheque or document or concluding a letter'. That is, the purpose of the signature is to authenticate the message as originating from the purported signer.

A Digital Signature is a mathematical scheme for demonstrating the authenticity of a digital message or document. A valid digital signature gives a recipient reason to believe that the message was created by a known sender, such that the sender cannot deny having sent the message (authentication and non-repudiation) and that the message was not altered in transit (integrity). Digital signatures are commonly used for software distribution, financial transactions, and in other cases where it is important to detect forgery or tampering. Digital signatures employ a type of asymmetric cryptography. For messages sent through a non-secure channel, a properly implemented digital signature gives the receiver reason to believe the message was sent by the claimed sender. In many instances, common with engineering companies for example, digital seals are also required for another layer of validation and security. Digital seals and signatures are equivalent to handwritten signatures and stamped seals. Digital signatures are equivalent to traditional handwritten signatures in many respects, but properly implemented digital signatures are more difficult to forge than the handwritten type.

Section 2(p) of the Information Technology Act, 2000 (Act) defines the term, 'Digital Signature' as "... ... ... authentication of any electronic record by a subscriber by means of an electronic method or procedure in accordance with the provisions of section 3". Under sub-Section (1) of Section 3 of the Act, "Subject to the provisions of this section any subscriber35 may authenticate an electronic record by affixing his digital signature." Sub-Section (2) of Section 3 of the Act reads as under.

"The authentication of the electronic record shall be effected by the use of asymmetric crypto system and hash function which envelop and transform the initial electronic record into another electronic record."

A combined reading of Section 2(p) and sub-sections (1) and (2) of Section 3 makes it clear that in terms of the Act an electronic record may be authenticated by affixing 'digital signature' and if a party wants to authenticate the electronic record by affixing digital signature, the electronic method or procedure for affixing digital signature shall be asymmetric crypto system and hash function. While authentication of an electronic record by affixing digital signature is optional, the procedure for affixing digital signature, namely, use of asymmetric crypto system and hash function, is mandatory. A Digital Signature scheme typically consists of three algorithms;

- A key generation algorithm that selects a private key uniformly at random from a set of possible private keys. The algorithm outputs the private key and a corresponding public key.
- A signing algorithm that, given a message and a private key, produces a signature.
- A signature verifying algorithm that, given a message, public key and a signature, either accepts or rejects the message's claim to authenticity.

Two main properties are required. First, the authenticity of a signature generated from a fixed message and fixed private key can be verified by using the corresponding public key. Secondly, it should be computationally infeasible to generate a valid signature for a party without knowing that party's private key. A digital signature is an authentication mechanism that enables the creator of message to attach a code that act as a signature. It is formed by taking the hash of message and encrypting the message with creator's private key. Thus Digital Signatures provide the following three features:-

- **Authentication**- Digital signatures are used to authenticate the source of messages. The ownership of a digital signature key is bound to a specific user and thus a valid signature shows that the message was sent by that user.
- **Integrity** - In many scenarios, the sender and receiver of a message need assurance that the message has not been altered during transmission. Digital Signatures provide this feature by using cryptographic message digest functions.

- **Non Repudiation** – Digital signatures ensure that the sender who has signed the information cannot at a later time deny having signed it.

A secure digital signature should satisfy the following conditions:

1. It should be unique to the subscriber affixing it. A digital signature is unique and is based upon the message that is signed and the private key of the signer.
2. It should be capable of identifying such subscriber. What this implies is that the digital signature should be verifiable by the public key of the signer and by no other public key.
3. It should be created in a manner or using a means under the exclusive control of the subscriber. This implies that the signer must use hardware and software that are completely free of any unauthorized external control.
4. It should be linked to the electronic record to which it relates in such a manner that if the electronic record were altered, the digital signature would be invalidated. All standard software programs used to create digital signatures contain this feature. Without this feature the whole purpose of creating digital signatures would be defeated.

According to notification G.S.R. 735 (E), notified by the Central Government, a secure digital signature is one to which the following security procedure has been applied:

A. a smart card or hardware token, as the case may be, with cryptographic module in it, is used to create the key pair;
B. the private key used to create the digital signature always remains in the smart card or hardware token as the case may be;
C. the hash of the content to be signed is taken from the host system to the smart card or hardware token and the private key is used to create the digital signature and the signed hash is returned to the host system;
D. the information contained in the smart card or hardware token, as the case may be, is solely under the control of the person who is purported to have created the digital signature;
E. the digital signature can be verified by using the public key listed in the Digital Signature Certificate issued to that person;

F. the standards referred to in rule 6 of the Information Technology (Certifying Authorities) Rules, 2000 have been complied with, in so far as they relate to the creation, storage and transmission of the digital signature; and

G. the digital signature is linked to the electronic record in such a manner that if the electronic record was altered the digital signature would be invalidated.

Digital signature schemes, in the sense used here, are cryptographically based, and implemented properly to be effective. Digital signatures can also provide non-repudiation, meaning that the signer cannot successfully claim they did not sign a message, while also claiming their private key remains secret; further, some non-repudiation schemes offer a time stamp for the digital signature, so that even if the private key is exposed, the signature is valid. Digitally signed messages may be anything representable, examples include electronic mail, contracts, or a message sent via some other cryptographic protocol.

Cryptography

Cryptography is the science of enabling secure communications between a sender and one or more recipients. This is achieved by the sender scrambling a message (with a computer program and a secret key) and leaving the recipient to unscramble the message (with the same computer program and a key, which may or may not be the same as the sender's key). There are two types of cryptography: Secret/Symmetric Key Cryptography and Public Key Cryptography.

(1) Secret key (symmetric/conventional) cryptography - is a system based on the sender and receiver of a message knowing and using the same secret key to encrypt and decrypt their messages. One weakness of this system is that the sender and receiver must trust some communications channel to transmit the secret key to prevent from disclosure. This form of cryptography ensures data integrity, data authentication and confidentiality.

(2) Public key (asymmetric) cryptography - is a system based on pairs of keys called public key and private key. The public key is published to everyone while the private key is kept secret with the owner. The need for a sender and a receiver to share a secret key and trust some communications channel is eliminated. This concept was introduced in 1976 by Whitfield Diffie and Martin Hellman. The Digital Signatures created using the private key ensure data integrity, data authentication and non-repudiation. However, to ensure confidentiality, encryption of the data has to be done with the recipient’s public key.

6.3 Digital Signature versus Handwritten Signatures

A handwritten signature scanned and digitally attached with a document does not qualify as a Digital Signature. A Digital Signature is a combination of 0 & 1s created using crypto algorithms. An ink signature can be easily replicated from one document to another by copying the image manually or electronically. Digital Signatures cryptographically bind an electronic identity to an electronic document and the digital signature cannot be copied to another document. Further, paper contracts often have the ink signature block on the last page, allowing previous pages to be replaced after the contract has been signed. Digital signatures on the other hand compute the hash or digest of the complete document and a change of even one bit in the previous pages of the document will make the digital signature verification fail. As can be seen in the underlying figure, a Digital Signature is a string of bits appended to a document. The size of a digital signature depends on the Hash function like SHA 1 / SHA2 etc used to create the message digest and the signing key. It is usually a few bytes.

6.4 Electronic Signatures versus Digital Signatures

Electronic Signatures is very wide and Digital Signature is only one of the many kinds of Electronic Signature one can envisage. The term Electronic Signature is defined under Section 2(ta) of the Information Technology Act, 2000 (as inserted by Information Technology Amendment Act, 2008) as follows: Electronic Signature means authentication of any electronic record by a subscriber by means of the electronic technique specified in the second schedule and includes digital signature. The expression 'Digital Signature' is defined under Section 2(p) as follows: 'Digital Signature' means authentication of any electronic record by a subscriber by means of an electronic method or procedure in accordance with the provisions of Section 3. Electronic Signature is wider term and Digital Signature is one kind of and Electronic Signature under the Information Technology Act, 2000. Therefore, a Digital Signature is an Electronic Signature, but an Electronic Signature is not necessarily a Digital Signature. A digital signature is a "secure" electronic signature which uses encryption and passwords to protect the integrity of the signature and guarantee the authenticity of the party who signed it. Electronic

signatures are popular because they are easy to use. Customers can sign documents online with a click of the mouse or by using their fingers to trace a handwritten signature onto a document.

The downfall of electronic signatures is that they aren't regulated like digital signatures are. It's up to each vendor to make their own standards, and you have to take their word for it when they say their signatures are secure.

Electronic signatures don't have the secure coding that digital signatures have. That technology is what links the signature to the signer's identity and to the time the document was signed. Essentially, electronic signatures are an image placed on the document, but they can't show if someone tampers with the document after it is signed.

6.5 How digital signature works

A. In E-mail-

Suppose Sender wants to send a signed data/message to the recipient. He creates a message digest (which serves as a "digital fingerprint") by using a hash function on the message. Sender then encrypts the data/message digest with his own private key. This encrypted message digest is called a Digital Signature and is attached to sender's original message, resulting in a signed data/message. The sender sends his signed data/message to the recipient. When the recipient receives the signed data/message, he detaches sender's digital signature from the data/message and decrypts the signature with the sender's public key, thus revealing the message digest. The data/message part will have to be re-hashed by the recipient to get the message digest. The recipient then compares this result to the message digest he receives from the sender. If they are exactly equal, the recipient can be confident that the message has come from the sender and has not changed since he signed it. If the message digests are not equal, the message may not have come from the sender of the data/message, or was altered by someone, or was accidentally corrupted after it was signed.

b. In web site

When a Certificate is installed in a web server, it allows users to check the server's authenticity (server authentication), ensures that the server is operated by an organization with the right to use the name associated with the server's digital

certificate. This safeguard's the users from trusting unauthorized sites. A secure web server can control access and check the identity of a client by referring to the client certificate (client authentication), this eliminates the use of password dialogs that restrict access to particular users. The phenomenon that allows the identities of both the server and client to be authenticated through exchange and verification of their digital certificate is called mutual server-client authentication. The technology to ensure mutual server-client authentication is Secure Sockets Layer (SSL) encryption scheme.

Technology behind Digital Signature

A digital signature is not a digitized image of handwritten signature. It is a block of data at the end of an electronic message that attests to authenticity of the said message. Digital signatures are an actual transformation of an electronic message using public key cryptography. It requires a key pair (private key for encryption and public key for decryption) and a hash function (algorithm).

Creating a Digital Signature

Step 1: Signer demarcates what is to be signed. This delimited information to be signed is termed as the 'message'.

Step2: A hash function in the signer's software computes a hash result (message digest or digital fingerprint) unique to the message.

Step 3: The signer's software then transforms (encrypts) the hash result into a digital signature using the signer's private key. The resulting digital signature is thus unique to both the message and the private key used to create it.

Step 4: The digital signature (a digitally signed hash result of the message) is attached to its message and stored or transmitted with its message. Such a digital signature is unique to its message, it is useful if it maintains a reliable association with its message. Signer sends both digital signature and the message to the recipient.

Verifying a Digital Signature

Step 1: receives digital signature and the massage.

Step 2: applies signer's public key on the digital signature.

Step 3: Recovers the hash result (message digest) from the digital signature.

Step 4: Computes a new hash result of the original message by means of the same hash function used by the signer to create the digital signature.

Step 5: Compares the hash results recovered in Step 3 and Step 4.

If the hash result computed by the verifier is identical to the hash result extracted from the digital signature during the verification process, it indicates that the message remained unaltered. If they are not equal, it would mean that the message either originated elsewhere or was altered after it was signed, and the recipient can reject the message.

Verification is a two prong process: one, to verify whether the signer's private key was used to digitally sign the message and two, whether the newly computed hash result matches the original has result which was recovered from the digital signature during the verification process.

The processes of creating and verifying a digital signature provide a high level of assurance that the digital signature is genuinely the signer's. These processed grant legal sanctity to digital signatures.

Digital Signature and Public Key Infrastructure

The basic problem with the aforesaid digital signature regime is that it operates in online, software driver space, without human intervention. Sender sends a digitally signed message; recipient receives and verifies it. The only requirement is that both sender and the recipient to have digital signature software at respective ends.

A digital signature certificate securely binds the identity of the subscriber. It contains name of the subscriber, his public key information, name of the Certifying Authority who issued the digital signature certificate, its public key information and the certificate's validity period. These certificates are stored in an online, publicly accessible repository maintained by the Controller of Certifying Authorities or in the repository maintained by the Certifying Authority. Every Certifying Authority has to maintain operation as per its certification practice statement (CPS). The CPS specifies the practices that each Certifying Authority employs in issuing digital signature certificates.

The mass implementation of digital signature certificates in the Internet environment is done via Public Key Infrastructure. It establishes a framework or system to use digital signature certificates, encryption and digital signature as an authentication mechanism and devises management methods for such usage. The basic idea behind PKI is to integrate the use of digital certificate, CAs and other

security mechanisms to provide and infrastructure that can be used to validate each party involved in e-commerce; thereby making e-commerce secure.

Public Key Infrastructure (PKI) process

Public Key Infrastructure is about the management and regulation of key pairs by allocating duties between contracting parties (controller / Certifying Authority / Subscribers), laying down the licensing and business norms for Certifying Authorities and establishing business processes/ application to construct contractual relationships in a digitized world. The idea is to develop a sound public key infrastructure for efficient allocation and verification of digital signature certificate.

Step 1: Subscriber applies to Certifying Authority for Digital Signature Certificate.

Step 2: Certifying Authority verifies identity of subscriber and issues Digital Signature Certificate.

Step 3: Certifying Authority forwards Digital Signature Certificate to Repository maintained by the Controller.

Step 4: Subscriber digitally signs electronic message with private key to ensure Sender Authenticity, Message Integrity and Non-Repudiation and sends to Relying Party.

Step 5: Relying party receives message, verify Digital Signature with Subscriber's Public Key, and goes to Repository to check status and validity of Subscriber's Certificate.

Step 6: Repository does the status check on subscriber's certificate and inform back to the Relying Party.

6.6 Digital Signature and Legal Issues

As evident digital signature fulfill all statutory requirements associated with acceptance of handwritten signatures. The law does not recognize digital signatures in a stand-alone environment. It gives recognition to the whole system the public key infrastructure including the standards, which create and verify digital signature.

T

o accept or reject digital signature, one must ask the following questions.

a) Whether the Certifying Authority trusted third party is a licensed one?
b) Whether a digital signature has been created as per the technology standards prescribed under the law?
c) Whether the digital signature verification process has been successful?

Affirmative answers to all above questions will give inviolability to the digital signatures by making them legally binding to the signer (sender).

Digital signature establishes the principle that, in an electronic environment, the basic legal functions of a signature are performed by way of a method that identifies the signer of an electronic message and also confirms that the said signer approved the content of that electronic message.

The Indian Evidence Act

After the Information Technology Act 2000, it was necessary to make an applicable amendment in the Indian Evidence act, to make it compatible.

Section 3 in the definition of "Evidence", for the words "all documents produced for the inspection of the Court", the word "all document including electronic records produced for the inspection of the Court"

Section 47-A, says when the court has to form an opinion as to the digital signature or any person, the opinion of the certifying authority which has issued the Digital Signature Certificate is a relevant fact. It means while drawing the conclusion, court gives the weight of the digital signature as a relevant fact.

67-A proof as to digital signature – except in the case of a secure digital signature, if the digital signature of any subscriber is alleged to have been affixed to an electronic record the fact that such digital signature is the digital signature of the subscriber must be proved.

Section 85-B exhibits the positive presumption as Presumption as to electronic records and digital signatures. In any proceedings involving a secure electronic record, the Court shall presume unless contrary is proved, that the secure electronic record has not been altered since the specific point of time to which the secure status relates.

Indian Penal Code

Section 464 - Making a false document: A person is said to make a false document or false electronic record—

First — who dishonestly or fraudulently-

Makes or transmits any electronic record or part of any electronic record;

- affixes any [electronic signature] on any electronic record;
- makes any mark denoting the execution of a document or the authenticity of the [electronic signature],

with the intention of causing it to be believed that such a document or a part of document, electronic record or [electronic signature] was made, signed, sealed, executed, transmitted or affixed by or by the authority of a person by whom or by whose authority he knows that it was not made, signed, sealed, executed or affixed; or

Secondly —Who, without lawful authority, dishonestly or fraudulently, by cancellation or otherwise, alters a document or an electronic record in any material part thereof, after it has been made, executed or affixed with [electronic signature] either by himself or by any other person, whether such person be living or dead at the time of such alteration; or

Thirdly —Who dishonestly or fraudulently causes any person to sign, seal, execute or alter a document or an electronic record or to affix his [electronic signature] on any electronic record knowing that such person by reason of unsoundness of mind or intoxication cannot, or that by reason of deception practiced upon him, he does not know the contents of the document or electronic record or the nature of the alteration.

6.7 Digital Signature Certificates (DSC)

Digital Signature Certificates (DSC) is the electronic format of physical or paper certificate like a driving License, passport etc. Certificates serve as proof of identity of an individual for a certain purpose; for example, a Passport identifies someone as a citizen of that country; who can legally travel to any country. Likewise, a Digital Signature Certificate can be presented electronically to prove your identity, to access information or services on the Internet or to sign certain documents digitally.

Digital Signature Certificates can be used for the following:

- For sending and receiving digitally signed and encrypted emails.
- For carrying out secure web-based transactions, or to identify other participants of web-based transactions.
- In e-Tendering, e-Procurement

- For signing documents like MSWord, MS Excel and PDFs.
- With MCA and Income Tax

A Digital Signature Certificate authenticates the identity electronically. It also provides with a high level of security for online transactions by ensuring absolute privacy of the information exchanged using a Digital Signature Certificate. This certificate can be used to encrypt information such that only the intended recipient can read it. You can digitally sign information to assure the recipient that it has not been changed in transit, and also verify your identity as the sender of the message. Legally valid Digital Signature Certificates are issued only through the Controller of Certifying Authorities (CCA), Govt. of India, licensed Certifying Authorities, such as e-Mudhra, NIC, TCS, MTNL, n-code etc. A Certifying Authority is a trusted agency whose central responsibility is to issue, revoke, renew and provide directories for Digital Signature Certificates. According to Section 24 of the Information Technology Act 2000, "Certifying Authority" means a person who has been granted a license to issue Digital Signature Certificates.

The Controller of Certifying Authorities (CCA) is a Government of India undertaking that license and regulates the working of Certifying Authorities. The CCA certifies the public keys of Certifying Authorities, which enables users in the cyberspace to verify that a given certificate is issued by a licensed Certifying Authority. For this purpose, CCA operates, the Root Certifying Authority of India (RCAI). The CCA also maintains the National Repository of Digital Signature Certificate (NRDC), which contains all the certificates issued by all the CAs in the country.

There are four classes of Digital Signature Certificates:-

- **Class 0 Certificate:** Only for demonstration/ test purposes.
- **Class 1 Certificate:** To individuals/private subscribers for E-Mail
- **Class 2 Certificate:** These certificates will be issued for both business personnel and private individuals use. These certificates will confirm that the information in the application provided by the subscriber does not conflict with the information in well-recognized consumer databases.
- **Class 3 Certificate:** This certificate will be issued to individuals as well as organizations. As these are high assurance certificates, primarily intended for e-

commerce applications, they shall be issued to individuals only on their personal (physical) appearance before the Certifying Authorities.

A Digital Signature Certificate explicitly associates the identity of an individual/device with a pair of electronic keys - public and private keys - and this association is endorsed by the Certifying Authority. The certificate contains information about a user's identity (for example, their name, pin code, country, email address, the date the certificate was issued and the name of the Certifying Authority that issued it). These keys complement each other in that one does not function in the absence of the other. They are used by browsers and servers to encrypt and decrypt information regarding the identity of the certificate user during information exchange processes. The private key is stored on the user's computer hard disk or on an external device such as a token. The user retains control of the private key; it can only be used with the issued password. The public key is disseminated with the encrypted information. The authentication process fails if either one of these keys in not available or do not match. This means that the encrypted data cannot be decrypted and therefore, is inaccessible to unauthorized parties.

Suspension of Digital Signature Certificate

The Certifying Authority, which has issued a Digital Signature Certificate, may suspend such Digital Signature Certificate:

1. on a request from the subscriber listed in the Digital Signature Certificate,
2. on a request from any person duly authorized to act on behalf of that subscriber,
3. if it is of opinion that the Certificate should be suspended in public interest.

A Digital Signature Certificate cannot be suspended for a period exceeding 15 days unless the subscriber has been given an opportunity of being heard in the matter.

On suspension of a Digital Signature Certificate the Certifying Authority shall communicate the same to the subscriber.

Revocation of Digital Signature Certificate

A Certifying Authority can revoke a Certificate issued by it on the:

1. r

equest of the subscriber, or

2. r

equest of any person authorized by him, or

3. u

pon the death, dissolution or winding up of the subscriber.

A Certifying Authority may revoke a Digital Signature Certificate issued by it at any time, if it is of the opinion that:

1. a material fact represented in the Digital Signature Certificate is false or has been concealed,
2. a requirement for issuance of the Digital Signature Certificate was not satisfied,
3. the Certifying Authority's private key or security system was compromised in a manner materially affecting the Digital Signature Certificate's reliability,
4. the subscriber has been declared insolvent or dead, has been dissolved, wound-up or otherwise ceased to exist.

A Digital Signature Certificate may not be revoked unless the subscriber has been given an opportunity of being heard in the matter. On revocation of a Digital Signature Certificate under this section, the Certifying Authority is required to communicate the same to the subscriber.

6.8 Summary

Digital signatures have been in use for quite a while to authenticate various e-commerce transactions. The processes of creating and verifying a digital signature provide a high level of assurance to the involved parties that the e-signature is genuinely the signer's, and that the electronic document (or the e-contract) is authentic.

Enter digital signature and electronic transactions have become secured. Digital signature works on the principle of Public Key Infrastructure (PKI). It is a cryptography based on a concept of key pairs (private and public key). Public and private key pairs are nothing but large prime numbers generated by a mathematical algorithm.

The key pairs are used for both signing and encrypting the message. Both use cryptography (technology). Public key of an individual is made known to receivers while the private key is kept confidential. Private Key helps to prove unequivocally that you are who you claim to be. PKI brings in authentication, confidentiality, integrity and legal non-repudiation in electronic transactions.

The user's public key is signed by the certifying authority's private key. Any check on the certificate will help identify the certifying authority's root. Since digital certificate is issued by a licensed certifying authority it goes to provide legal non-repudiation.

6.9 Self-Assessment Test

1. What is a Digital Signature?
2. What is difference between Digital Signature and Handwritten Signatures?
3. Distinguish between Electronic Signatures and Digital Signatures?
4. Discuss the legal issues relating to Digital Signature in India.
5. What is a Digital Signature Certificate and how does it work?
6. What are the different classes of Digital Signature Certificates?

6.10 Suggested Readings

- Rohas Nagpal, “Digital Signatures & the Indian law”
- Rohas Nagpal, “An Introduction to digital signatures”
- “Guidelines for Usage of Digital Signatures in e-Governance”, Department of Information Technology Ministry of Communications and Information Technology Government of India, (December 2010)

Unit-7
Electronic Money and E- Transactions

Objectives:

After going through this Unit you should be able to understand:

- Meaning of electronic transaction
- Various types Electronic transaction
- Benefits and drawback of Electronic transaction
- Risk factors in Electronic transaction

Structure:

7.1 Introduction
7.2 Characteristics of E-money
7.3 Types and Modalities of Electronic Transaction
7.4 Merits and Demerits of E-money
7.5 Business issues and E-money
7.6 Risks in E- Transactions
7.7 Summary
7.8 Self-Assessment Test
7.9Suggested Readings

7.1 Introduction

As payment is an integral part of mercantile process, electronic payment system is an integral part of e-commerce. The emergence of e-commerce has created new financial needs that in many cases cannot be effectively fulfilled by traditional payment systems. Electronic payment system and e-commerce are intricately linked given that online consumers must pay for products and services. Electronic money is a new concept in online payment system because it combines computerized convenience with security and privacy and improve on paper cash. Its versatility opens up a host of new markets and applications. E-money presents

some interesting characteristics that make it an attractive alternative for payment over the Internet.

A European Commission website describes electronic money, as "a digital equivalent of cash, stored on an electronic device or remotely at a server." It cites as one example an "electronic purse", in which users store relatively small amounts of money on a smart card to use for small payments. It also points to e-money being stored on and used via mobile phones or internet based payment accounts.

E-money must have four properties: monetary value, interoperability, irretrievability and security. E-money focuses on replacing cash as the principal payment vehicle in consumer-oriented electronic payments. Although it may be surprising to some, cash is still the most prevalent consumer payment instrument. Cash remains the dominant form of payment for three reasons:

1. Lack of trust in the banking system
2. Inefficient clearing and settlement of non-cash transactions and
3. Negative real interest rate paid on bank deposits.

7.2 Characteristics of E-money

There have been many proposals about the characteristics of e-money. At first, properties of traditional money, namely; medium of exchange, value, security, interoperability and portability should be fulfilled. Some claim that e-money does not perform all the functions of conventional money, since it currently performs only the function of medium of exchange.

According to some writers, the e-money should be secure, anonymous, portable, two-way, offline capable and divisible. Others offers the important characteristics for an Internet payment system including security, reliability, scalability, anonymity, acceptability, customer base, flexibility, convertibility, efficiency, ease of integration with applications, and ease of use. It is an undeniable fact that it can not be expected for every type of e-money to satisfy each of these criteria.

Security and Reliability: E-money infrastructure must be secure enough to prevent any interceptions. Transactions between the partners should be protected to the risk of cyber crimes. The e-money system must be highly robust, unbreakable and available at all times in order to provide the same trust to traditional money.

People generally used to encounter that a connection to a bank can be down due to technical problems, but they would certainly be quite annoyed if their e-money was crashed or unavailable.

Anonymity: It is a way of protecting the privacy of the customer. No other party should be able to identify each other. Any transactions should be private. Although cash is fully anonymous, credit cards have limited anonymity due to central database of the processing institution which stored all the information about the transactions.

Portability: E-money should not be dependent on any physical location. There should be possibility to secure the e-money and store it somewhere on the net without limiting access to it at any random terminal on the condition. It must also be possible to use of smart cards and other media for storing and using money. The e-money has to be distributable and transferable though open networks and storable on different devices and in different locations inside and outside these networks.

Off-line capable: It should be possible to execute off-line between the two exchanging parties without requiring third parties. The system must not rely on online checks or account balance checking. It should serve same as traditional cash comfort that not required parties having bank account. It can be spent anytime and anywhere without any authentication.

Divisible and Reusability: Even though physical cash has some restrictions in terms of size and number that cannot be divisible in some certain cases, there must not be any restriction for the application of e-money. Like traditional money, e-money can be used again and again by transferring to another person without bank intervention.

Flexibility: The payment infrastructure should support several payment methods including credit cards, personal checks, and even anonymous electronic cash. These alternative forms of payment instruments should be integrated into a common framework.

Scalability: The payment infrastructure must have ability to handle the increasing currency traffic without suffering a noticeable loss of performance. The payment infrastructure must support multiple servers, distributed across the network.

Acceptability E-money must be accepted widely by the consumers. It depends on the usefulness and interoperability of it. Usefulness means; it should be easy to use for every normal person that no additional personal expertise must be needed. Users should modify their options, for example they should be able to limit their maximum or minimum payments, and they should be able to monitor their transactions. It must be user–friendly. Efficiency indicates that the cost of e-money should not be overvalued that hinder common use of it and it must be feasible for micro payments. Interoperability (easy to integrate) implies that one type of payment mechanism must have ability to interact with other systems and devices. Funds represented by one mechanism should be easily convertible into funds represented by others. System must have the ability to be easily upgraded and updated.

7.3 Types and Modalities of Electronic Transaction

a. Smart Cards

A first type of e-money consists of so-called "electronic purses" in the form of smart cards. These cards resemble other types of plastic money, except that they have an electronic microchip embedded in a small gold plate in front of the card rather than a magnetic strip in the back. Smart cards for e-payments use the microchip to store a certain amount of value by use of encryption algorithms that can only be decoded by an adequate reader. These card-based e-purses are generally intended for small payments. They allow the payment of exact amounts at unstaffed locations such at vending, parking and ticketing machines. Smart cards can also be used for online purchases if the consumer has a card reader attached to their computer. This card reader will unlock the value in the card and send the information to the online retailer, facilitating an anonymous e-commerce transaction.

b. Server Based E-money

Server based e-money was developed almost simultaneously with the rise of card-based e-money, driven by the opportunities offered by the Internet. The most successful server based e-money systems consist of pre-funded personalized payment schemes, involving the transfer of funds stored on a personalized online account, similar to bank deposits. Server based money can be accessed via websites, e-mail or SMS. The innovative nature of these schemes lies in the fact that accounts can be opened and money can be sent by simple use of e-mail addresses or mobile phone numbers.

Server based e-money may fail to meet the requirement of security, which was identified as an essential requirement for the success of electronic payment schemes.

c. Disposable and Virtual pre-funded Cards

Disposable and virtual pre-funded cards are a type of server based e-money which physically appears in the form of a card. Contrary to smart cards, the deposited funds are not stored on the card itself, but on a server. They typically imply a transfer of centrally stored anonymous claims that have been purchased in advance. These cards are often issued as scratch cards with a hidden identifying number, or sent as virtual cards via SMS. The received number must be entered into the issuer's website to activate the anonymous "card account", or can be used directly for paying at a content provider's website. These disposable and virtual pre-funded cards typically target individuals that do not possess debit or credit cards (such as minors) and persons who wish to remain anonymous when making online purchases. Accordingly, they are being used increasingly in niche markets such as online entertainment, including gaming and adult entertainment. This type of cards addresses the essential requirement of privacy and allows consumers to make anonymous purchases.

d. Platform Payment Systems

"Platform Payment Systems" concern payment systems and virtual wallets created by online platform operators, which allow users of the platform to purchase various goods, usually related to the platform itself. For example, social communities often allow their users to store money on their user accounts, in order to purchase digital services related to the community (*e.g.,* tokens to buy

applications to be displayed on the user's home page and tokens to pay for premium places).

e. Mobile Payment Systems

A large variety of mobile e-payment schemes have been developed. One can distinguish between schemes that are funded via a prepaid account and schemes that are added to telephone bills ("post paid"). These mobile payment systems can either debit payments from the holder's credit card or from his bank account. Mobile transactions can also be carried out via e-money schemes. Such e-money can either be integrated into mobile devices, or can be stored on a card or server. Mobile payment schemes are typically popular with minors, to perform purchases of limited value, such as the purchase of ringtones. Another distinction to be made is between proximity payments and distance payments. The first type of mobile payments allows contactless transmission of the payment order, for example via radio frequency, as is used in public transportation. These represent one of the most important innovation ns in the banking system, increasing speed, simplicity and convenience when purchasing goods. The distance type of mobile payments usually requires the help of an SMS or automatic voice message. There is little progress visible on the standardization and interoperability of payment solutions between mobile network operators in the national markets, and even less at the European level.

f. Vouchers and Gift Cards

Building on the popularity of frequent-flier miles and coupons, a number of internet start-ups started designing their own online currencies for use as a marketing tool to attract more customers to sites and entice them to shop there. Similarly, different issuers of paper vouchers and gift cards showed an interest in switching their products to an electronic format. As such, electronic coupons, vouchers and gift cards emerged, which can be used to purchase products and services from participating merchants. Electronic vouchers and gift cards are one of the strongest growth markets for prepaid cards, particularly because they allow parents to enable their children to pay for services online without the use of an adult's credit card. Typical examples of electronic gift cards include the Amazon Gift Card, which can both be bought online. Vouchers and gift cards are very similar to smart cards and disposable and virtual pre-funded cards. However, they

are typically obtained as a present or via a third party other than the issuer. Vouchers and gift cards are not always issued on receipt of funds. They may also be acquired by performing certain activities, such as collecting points or bringing in new customers.

g. Electronic Cheque Payment System

Electronic cheques address the electronic needs of millions of businesses, which today exchange traditional paper cheques with the other vendors, consumers and government. The e-cheque method was deliberately created to work in much the same way as conventional paper cheque. An account holder will issue an electronic document that contains the name of the financial institution, the payer's account number, the name of payee and amount of cheque. Most of the information is in uncoded form. Like a paper cheques e-cheques also bear the digital equivalent of signature: a computed number that authenticates the cheque from the owner of the account. Digital chequing payment system seeks to extend the functionality of existing chequing accounts for use as online shopping payment tools. Electronic cheque system has many advantages: (1) they do not require consumers to reveal account information to other individuals when setting an auction (2) they do not require consumers to continually send sensitive financial information over the web (3) they are less expensive than credit cards and (4) they are much faster than paper based traditional cheque. But, this system of payment also has several disadvantages. The disadvantage of electronic cheque system includes their relatively high fixed costs, their limited use only in virtual world and the fact that they can protect the user's anonymity. Therefore, it is not very suitable for the retail transactions by consumers, although useful for the government and B2B operations because the latter transactions do not require anonymity, and the amount of transactions is generally large enough to cover fixed processing cost. The process of electronic cheque system can be described using the following steps.

Step 1: a purchaser fills a purchase order form, attaches a payment advice (electronic cheque), signs it with his private key (using his signature hardware), attaches his public key certificate, encrypts it using his private key and sends it to the vendor.

Step 2: the vendor decrypts the information using his private key, checks the purchaser's certificates, signature and cheque, attaches his deposit slip, and

endorses the deposit attaching his public key certificates. This is encrypted and sent to his bank.

Step 3: the vendor's bank checks the signatures and certificates and sends the cheque for clearance. The banks and clearing houses normally have a private secure data network.

Step 4: when the cheque is cleared, the amount is credited to the vendor's account and a credit advice is sent to him.

Step 5: the purchaser gets a consolidated debit advice periodically.

h. Digital Wallet

A digital wallet refers to an electronic device that allows an individual to make electronic commerce transactions. This can include purchasing items on-line with a computer or using a Smartphone to purchase something at a store. Increasingly, digital wallets are being made not just for basic financial transactions but to also authenticate the holder's credentials. For example, a digital-wallet could potentially verify the age of the buyer to the store while purchasing alcohol. It is useful to approach the term "digital wallet" not as a singular technology but as three major parts: the system (the electronic infrastructure) and the application (the software that operates on top) and the device (the individual portion).

An individual's bank account can also be linked to the digital wallet. They might also have their driver's license, health card, loyalty card and other ID documents stored on the phone. The credentials can be passed to a merchant's terminal wirelessly via near field communication (NFC). Certain sources are speculating that these Smartphone 'digital wallets' will eventually replace physical wallets.

7.4Merits and Demerits of E-money

Merits of e-money

- E-money may increase the confidence to online shopping. Most of the people who use their credit cards for online shopping feel unconfident due to risk of fraud and other cyber crimes.
- With anonymous e-money, nearly anonymous shopping can be done. Digital cash can provide greater anonymity than paper currency. If digital cash replaces credit cards for ordinary commerce in tangible things, the effect will be to increase the

amount of information available on the consumer's buying habits. This may expand electronic commerce all over the world which is beneficial for the global economy.

- Relatively high processing costs make it uneconomical for trader to offer goods or services by credit or debit card requiring small amounts. E-money would enable to realize these kinds of small transactions.
- E-money which has multiple currencies simultaneously can provide consumers to transact all over the world, compare the prices and buy goods and services from different countries. Widespread use of Internet-tradable digital cash might internationalize money.
- In most of the countries a lot of people suffer from paying their credit cards bill because of excessive usage. People can spend as they have and the risk of insolvency causing social and individual problems may be diminished significantly.
- E-money can be easily and rapidly converted to the value by the merchant than credit cards. This should enable more firms to offer their goods or services online. This may cause savings in terms of money-time and labour force which is beneficial to overall economy.
- Currency is preferred to deposits because its cost of usage is lower than deposits (deposits have cost: trips to the bank, fees etc.); on the other hand, deposits are safer than currency and make the payment of large amounts easier. E-money, on its part, has both the advantages of currency and deposits: its cost of usage is very low and, at the same time, is safer than currency. For these reasons, e-money can be a very good substitute for both currency and deposits, and the public could maximize the efficiency of exchanges by demanding ‘very little’ conventional money.
- People can transfer funds, purchase stocks, and offer a variety of other services without having to handle physical cash or checks as long as bank is providing such services online. The significant effect is People do not have to queue in lines, thus saving our time.
- Debit cards and online bill payments allow immediate transfer of funds from an individual's personal account to a business's account regardless the designated place (around the globe) by few clicks without any actual paper transfer of money. This bring convenience individual like us and businessmen.

- Consumers will have greater privacy when shopping on the Internet using electronic money instead of ordinary credit cards.

Demerits of e-money

- The most important drawback is the risk of money laundering in which to circulate it faster than conventional money. It could also be very difficult to track totally anonymous money. However, to prevent crimes, some sort of a system that requires revocable anonymity in some exceptional cases should be designed even if it is very difficult.
- Double spending is one of the most difficult parts of e-money. Since copying information is possible in the digital world, there is nothing to prevent anyone from duplicating coins and using them multiple times. A working e-cash system must prevent such misuse and for that purpose, each coin has to be recognized in some extend. The problems with double spending can be tackled with public key cryptography and PKI. The degree of the anonymity of the payment can be controlled with blind-signature technique and secret splitting. The main problem is; to prevent double spending requires large databases for past transactions.
- There is no way of distinguishing a forged digital signature, unlike an analogue signature. As long as the secret keys have been kept safe, the signature can be considered non-reputable. If anyone gains access to a person's secret key, they can pretend to be her.
- In lack of legal measures in some countries, e-money cannot be reclaimable; a consumer who transfers digital cash to a fake merchant will suffer an immediate loss as merchant can easily spend this e-money before he can be traced.
- The risk of loss is another drawback. This problem can occur in the condition that e-money stored in a crashed hard drive, in particular for the anonymous e-money.
- E-Cash transaction security are the major concern. Frauds on E-Cash are on the catch recent years. Hackers with good skill able to hack into bank accounts and illegally retrieve of banking records has led to a widespread invasion of privacy and has promoted identity theft. There are many other tricks including through phishing website of certain banks and emails.
- Money flow and criminal/terrorist activities are harder to be traced by government. With the continued growth of E-Cash, money flow in and out of countries at

immediate speed without being traced will weaken the government's ability to monitor and income in tax. Money laundering and tax evasion could be uncontrollable in e-cash systems as criminals use untraceable internet transaction to hide assets offshore.

- E-Cash is not for everyone. Low income groups without computer and internet access are unable to enjoy the usage of E-Cash.
- There is also a pressing issue regarding the technology involved in electronic cash such power failures, internet connection failure, loss of records and undependable software. These often cause a major setback in promoting the technology.

7.5Business issues and E-money

E-money fulfills two main functions: as a medium of exchange and as a store of value. E-money is a perfect medium of exchange. By moving monetary claims quickly and by effecting instant settlement of transactions, e-money may help simplify the complex interlocking credit and liabilities that characterize today's commerce. For instance, small businesses that spend months waiting for big customers to pay their bills would benefit hugely from a electronic system in which instant settlement is the norm. Instant settlement of micropayments is also a tantalizing proposition.

The enormous currency fluctuations in international finance pose another problem. On the Internet, the buyer could be in Mexico and the seller in the United States. How do you check that the party in Mexico is giving a valid electronic currency that has suitable backing? Who holds the liability, the buyer or the seller? These are not technological issues but business issues that must be addressed for large-scale bilateral transaction to occur. Unless, we have one central bank offering one type of electronic currency, it is very difficult to see e-money being very prominent except in narrow application.

7.6 Risks in E- Transactions

One essential challenge of e-commerce is risk management. Operation of payment system incurs three major risks: fraud of mistake, privacy issues, and credit risk. Preventing mistakes might require improvements in the legal

framework. Dealing with privacy and fraud issues requires improvement in the security framework.

Operational risk and E-money

Operational risk associated with e-money can be mitigated by imposing constraints, such as limits on-

(1) the time over which a given electronic valid,

(2) how much can be stored on and transferred by electronic in the number of exchanges that can take place before a money needs to be re-deposited with a bank or financial institution, and

(3) the number of such transactions that can be made during a given period of time.

The constraints introduce a whole new set of implementation issues. For example, time limits could be set beyond which the electron would expire and become worthless. The customer would have to redeem or exchange the money prior to the expiration deadline. For this feature to work, electronic money would have to be time-stamped, and time would have to be synchronized across the network to some degree of precision.

Finally, exchanges could be restricted to a class of service (e.g., electronic benefit could be used only for food, clothing, shelter or educational purposes). The exchange process should allow payment to be withheld from the seller upon the buyer's instructions until the goods or services are delivered within a specified time in the feature. Conversely it should allow delivery to be withheld upon the seller's instructions until payment is received.

Risk from Mistake and Dispute

Virtually all electronic payment systems need some ability to keep automatic records, for obvious reasons. From a technical standpoint, this is no problem for electronic systems. Credit and debit cards have them and even the paper based check creates an automatic record. Once the information has been captured electronically, it is easy and inexpensive to keep. For example, in many transaction processing systems, old or blocked accounts and never purged and old transactions histories can be kept forever on magnetic tape.

Given the intangible nature of electronic transactions and dispute resolution relying solely on records, a general law of payment dynamics and banking technology might be: no data need ever be discarded. The record feature is an

after-the-fact transcription of what happened, created without an explicit effort by the transaction parties. Features of these automatic records include-

- Permanent storage
- Accessibility and traceability
- A payment system database
- Data transfer to payment maker, bank, or monetary authorities.

Management Credit Risk

Credit or systemic risk is major concern in net settlement systems because a bank's failure to settle its net position could lead to a chain reaction of bank failures. The digital central bank must develop policies to deal with this possibility. Various alternatives exist, each with advantages and disadvantages. A digital central bank guarantee on settlement removes the insolvency test from the system because bank will more readily assume credit risks from other banks.

Without such guarantees the development of clearing and settlement systems and money markets may be impeded. A middle road is also possible, for example, setting controls on bank exposures (bilateral or multilateral) and requiring collateral. If the central bank does not guarantee settlement, it must define, at least internally, the conditions and terms for extending liquidity to banks in connection with settlement.

Managing Information Privacy

The electronic payment system must ensure and maintain privacy. Every time one purchases goods using a credit card, subscribes to a magazine or accesses a server, that information goes into a database somewhere. Furthermore, all these records can be linked so that they constitute in effect a single dossier. This dossier would reflect what items were bought and where and when. This violates one the unspoken laws of doing business: that privacy of customers should be protected as much as possible. All details of a consumer's payments can be easily aggregated: where and when, and sometimes what the consumer buys is stored. This collection of data tells much about the person and as such can conflict with the individual's right to privacy. Users must be assured that knowledge of transactions will be confidential, limited only to the parties involved and their designated agents.

Privacy must be maintained against eavesdroppers on the network and against unauthorized insiders. The users must be assured that they cannot be easily duped, swindled or falsely implicated in fraudulent transaction. This protection must apply throughout the whole transaction protocol by which a goods or service is purchased and delivered. This implies that, for many types of transactions, trusted third-party agents will be needed to vouch for the authenticity and good faith of the involved parties.

7.7 Summary

In the times of global challenges alternative payment systems carry more and more importance. One of such systems is the system of electronic payments, so called electronic money. An electronic transaction is an online business process that enables fund transfer through an electronic medium such as personal computer and mobile phones. Electronic transaction is being used in banking, retail, health care, online market and in government transaction. One essential challenge of e-commerce is risk management. Operation of payment system incurs three major risks: fraud of mistake, privacy issues, and credit risk. Preventing mistakes might require improvements in the legal framework.

7.8 Self-Assessment Test

1. What do you understand by E-money? What are the Characteristics of E-money?
2. Discuss the advantages and disadvantage of e-transaction.
3. What are the risks involved in e-transaction?
4. Discuss the various types of e-money.
5. Write a short note on Digital Wallet.

7. 9 Suggested Readings

- Singh Sumanjeet, “Emergence of Payment Systems in the Age of Electronic Commerce: The State of Art”
- A.Koponen, “E-commerce, Electronic Payments”
- By Jordan Whitehouse, “Types of e-commerce Payment Systems”
- Yang Jing, “On-line Payment and Security of E-commerce”

Unit-VIII
Tax Issues: Global Perspectives

Objectives:

After going through this Unit you should be able to understand:

- Various issues regarding taxation of e-commerce
- Principal of Permanent Establishment
- Role of 'Technical Advisory Group'

Structure:

8.1 Introduction
8.2 Aspects of Internet Electronic Commerce Relevant for Tax Policy Makers
8.3 General Tax Principles Relevant to E-Commerce Taxation
8.4 Taxation of e-commerce: the key underlying issues
8.5 Permanent Establishments
8.6 Technical Advisory Group
8.7 Summary
8.8 Self-Assessment Test
8.9 Suggested Readings

8.1 Introduction

The development of Electronic Commerce can be said to be the great event in the history of mankind. Whereas Europe and United States were the main beneficiaries of the industrial revolution, there are clear indications that India along with United States and China would be the major beneficiaries of the Electronic Commerce Revolution. The huge pool of technological manpower is at the basis of this indication.

The development of e-commerce modifies the way of doing business. For centuries, traditional business around the world has been based on two concepts:-

1. Physical presence; and

2. Physical delivery of goods and services.

Today physical presence is no longer necessary to perform activities (i.e., commercial transactions are no longer defined by geographical boundaries) and physical transactions are replaced by bytes of data. Since E-commerce can be conducted virtually instantaneously around the globe and around the clock, the question where the profits should be taxed becomes crucial. Taxing the Internet is a topic that makes global headlines, everyday. The lure of setting out national tariffs for every byte of data that follows and taxing every product traded hopes to herald a new economy for the taxman. Most governments are alarmed at the extreme growth of the internet, and they should be, as the Net is the largest free information system the world has ever seen.

The task of taxing commerce on the Internet is daunting, since the data flowing through the vast annals of the Internet is intangible and the network on which it is built is spread over the space of the Earth. The peculiarity of Net stems from the kind of "traffic" that flows through it- World Wide Web (WWW) pages, e-mail, internet relay chat, video conferencing, internet telephony, streaming audio and video file transfer and so on--- and each of this data is just a meaningless string of zeros and ones.

The development of Electronic Commerce has revolutionized the way business operates. It has also challenged the adequacy and fundamental validity of principles of international taxation such as physical presence, place of establishment etc. that has formed the basis of asserting tax liability. In cases of international e-commerce transactions, the tax issues are more complex. A few important problems which are faced in the International taxation of e-commerce are:-

1. There are no separate rules for taxation of electronic transactions.
2. Due to the absence of physical activity, it may be difficult to determine the place of the transaction and the source of income.
3. It may be difficult to trace the person who is responsible for entering into the transaction.
4. E-commerce may result in avoiding the “withholding tax”, due to payment being made by electronic means eg. Credit card etc.

5. Whether a website, server, telecommunication equipment, local access numbers, etc. constitute a permanent establishment or not, or should the source based taxation or the residency based taxation be applied to an E-transaction?

8.2 Aspects of Internet Electronic Commerce Relevant for Tax Policy Makers

Changes in the business practice due to the advent of the Electronic Commerce affects taxation in the following ways:-

(i) **Lack of any user control to the location of activity:** As the physical location of an activity becomes less important, it becomes more difficult to determine where an activity is carried out and hence the source of income.

(ii) **No means of identification of users:** In general, proof of identity requirements for Internet use is very weak. The pieces of an internet address (or domain name) only indicate who is responsible for maintaining that name. It has no relationship with the computer or user corresponding to that address or even where the machine is located.

(iii) **Reduced use of information reporting and withholding institutions**: Traditionally taxing statutes have imposed reporting and withholding requirements on financial institutions that are easy to identity. In contrast, one of the greatest commercial advantages of Electronic Commerce is that it often eliminates the need for intermediary institutions. The potential loss of these intermediary functions poses a problem for the tax administration.

8.3 General Tax Principles Relevant to E-Commerce Taxation

A. The Principle of 'Tax Neutrality'

The principle of tax neutrality requires that any equitable tax system treat economically similar income equally. For electronic commerce to flourish, the principle of tax neutrality, as applied to e-commerce, would require that income earned through electronic means should be taxed similarly to income earned through more conventional channels of commerce. To do otherwise would be to place e-commerce at a competitive disadvantage relative to other modes of commerce, defeating one of the purposes of an equitable tax system. The practical

application of tax neutrality, then, would be a position that no 'new' taxes should be placed on e-commerce transactions.

B. The 'Permanent Establishment' Concept

Article 5 of the OECD of the Model Income Tax Convention, defines a permanent establishment as "a fixed business place of business through which the business of an enterprise is wholly or partly carried on." Article 5 also provides that a permanent establishment may be created in a country by means of an agent, broker, or general commission agent. Permanent establishment is a key tax concept because, under most tax treaties, a business must be determined to have a permanent establishment presence in that country before the country can attempt to tax the profits of the business. As the OECD has stated, "tax conventions generally provide that business profits of non-residents may only be taxed in a country to the extent that they are attributable to a permanent establishment that the enterprise has in that country."

C. Source and Residence Based Taxation Principles

Countries impose taxes on companies based on both the source and residence principles. In general, if it is established that a company is a 'resident' of a country, that country may fix a legal right to tax that company's income. The concept of residency is grounded in the Permanent Establishment principle, and residency requirements are usually tied to some geographic or physical presence in the country. If a company fails to establish a residency in a country, the country may still impose taxes on the company's income if it is determined that the 'source' of the company's income was derived from within the country's borders. Most countries provide that the source of a company's income is the country in which the economic activities generating the income occur. Source of income principles generally have priority over residency rules, and the country of origin usually has the right to tax income. Double taxation is avoided by a credit or exemption system provided by the residence country. Such rules have been adopted by most taxing authorities worldwide.

8.4 Taxation of E-commerce: the key underlying issues

A. A potentially decreasing tax base

1. Displaced income

According to Arthur Cordell, of the Canadian Department of Industry, the "new wealth of nations" is to be found in the digital bits of information "pulsing through global networks." The income flows occurring over the Internet are a new and potent source of potential government tax revenue. However, if the potential tax revenue from this new form of income is not captured, the overall tax base will be eroded by a "double whammy": the total loss of tax revenue not collected, plus the loss of tax revenue from the income of workers displaced by new information technologies. The situation is most acute in Europe, which relies primarily on the "VAT" consumption tax for its tax base. The OECD estimates that half a billion European Currency Units will be lost by 2001 if the VAT is not applied to e-commerce transactions.

2. Tax avoidance and compliance issues

A second form of tax base erosion may occur due to the ephemeral nature of global e-commerce transactions. Such transactions are exceedingly difficult to verify since they leave no physical record and may be conducted with electronic cash. An unfortunate consequence of this new technology, according to the OECD, is that the Internet may become a prime conduit for business tax avoidance. The OECD posits that if electronic cash is floating around the Internet, the lack of a paper trail would prevent tax authorities from conducting accurate audits.

This problem would be especially acute for countries which rely on consumption taxes for tax revenue, such as the "VAT" (value added tax). Since consumption taxes are a tax on sales, any lost taxes on undetected consumption of products conducted over the Internet would mean a proportional loss to the country's tax base. Significantly, the value added tax is the single most important tax raising measure for all OECD countries, except Australia and the United States. In addition to lost income to government coffers, the Harvard Legislative Research Bureau argues that increased tax avoidance 'dramatically affects' the fairness of the tax system and distorts economic decision making.

B. Jurisdictional Issues: Problems in Determining Permanent

Establishment and Applying Source Based Taxation Principles to E-Commerce Transactions

With respect to e-commerce transactions, determining a taxable presence within a country may be a perilous proposition. According to the OECD, since Internet servers can be located in multiple global locations, defining them as a fixed place of business could lead to inadvertent double taxation. The following hypothetical illustrates some of the problems inherent in a common e-commerce transaction: "A customer in Norway uses his computer to access a server located in India to purchase goods produced by a U.S. company. The U.S. company has no other presence in, or contact with, Norway or India. Under these circumstances, which country or countries may tax the U.S. company's business profits on its sale to the Norwegian customer?"

As this example demonstrates, traditional physical presence or agency concepts of permanent establishment are difficult to apply within the realm of cyberspace. Several cogent issues arise. For example, does the presence of the U.S. company's Web site on the Norwegian Customer's computer qualify as a permanent establishment in Norway, or can it be shown that the location of the U.S. company's server in India qualifies as a permanent establishment?

Finally, in applying source of income rules, where might one say that most of the economic activity concerning this transaction takes place in Norway, in India, or in the U.S.? Obviously, there exists the contentious potential for multi-jurisdictional turf battles concerning the right to tax the company's profits in the transaction.

Since commerce in cyberspace transcends national borders and the fixed physical location of transactions, the U.S. Treasury has observed that source-based taxing schemes could be obsolete with respect to e-commerce.117 The Treasury has also indicated that residence-based taxing schemes should apply when the traditional concepts of permanent establishment and source-based taxation do not apply. The issue, of course, is whether there can be international coordination of such a regime, given that the great majority of companies conducting business over the Internet are American. Creating a regime may be difficult given that application of residence-based principles would mean that the United States would get to keep a large portion of e-commerce derived tax revenue. Additionally,

international coordination of tax matters may be problematic, because no area of the law is closer to the subject of sovereignty than taxation, and countries are generally very reluctant to surrender their autonomy in this area.

C. The 'Goods' vs. 'Services' vs. 'Intangibles' Distinction

A key issue for properly taxing e-commerce transactions is how to categorize certain e-commerce transactions in which the end-product is received on-line (e.g., software, online information services, digitized images, and film and video output). According to the OECD, many goods once sold in physical format are now available on-line. Classification issues are critical because of the possibility of a differential tax impact, both under United States and E.U. tax laws. For example, a product imported into a country as a 'good' may be subject to the VAT, rather than withholding taxes or income taxes, as long as the destination country does not have a permanent establishment in the country. An 'intangible,' however, may be subject to withholding taxes on its royalty payments, but not subject to the VAT. Finally, a 'service' may not be subject to any taxes at all, as long as the services are provided by a foreign company and are performed outside the country.

The Constraints

International tax issues in the area of e-commerce are manifold and include nexus of the vendor and tax enforcement agencies. Taxing authorities may have great difficulty collecting revenue from vendors conducting commerce through foreign Internet addresses. The foremost problem associated with Internet based commerce is fixing the place of transaction. The place where a web-server is located, the place where the user initializes the transaction and the server where payment is collected may be different. Electronic transfer of funds heightens the risk of money being sent to tax havens. Further, many jurisdictions rely on the taxpayer to voluntarily identify himself, herself or itself as falling within its tax system. Tax authorities may not be able to effectively enforce their rights to collect tax in such an environment, especially if a business does not consider itself to be within a tax jurisdiction and simply choose not to disclose its activities to the relevant authority.

Underlying any discussions as to whether a website, server, telecommunication equipment, local access numbers, etc. constitute a permanent establishment or not is the source or residency based taxation.

Not surprisingly, certain technology exporting countries are in favour of a move away from a source-based tax. The United States made a clear statement to this effect in the treasury paper. Treasury maintains that it is difficult to apply traditional concepts of source to link an electronic transaction with a particular country. This view has been re-affirmed by the USD and supported by Japan at the G8 meetings in Birmingham.

Importing countries will not necessarily take the same view and here is a danger that in the absence of clear guidelines that are universally accepted we will find some jurisdictions 'straining' the traditional concept of permanent establishment to catch electronic trade and preserve local taxing rights or (and potentially more alarming) seeking to apply 'royalty' treatment especially where treaties allow for a withholding tax on gross receipts.

8.5 Permanent Establishments

Where a foreign enterprise is considered to be carrying on business in a particular country, it will generally be subject to tax in that country on that source of business income. However, it may be exempted from tax on the business income in the particular country if certain provisions are in a bilateral tax treaty. Tax treaties will generally restrict the ability of a country to tax a non-resident on its business income sourced to that country unless the income is attributable to a "Permanent Establishment" in that country. Thus, a foreign corporation that is resident in a country with which its home country has a double tax treaty is liable for tax in the former only if it has a permanent establishment there.

Business profits are taxable in the State of the residence of the enterprise even if the business is carried on in the State of source, unless they are attributable to a permanent establishment is generally defined as 'a fixed place of business through which the affairs of an enterprise are carried on'. This definition contains the following conditions:-

- The existence of a 'place of business', i.e., a facility such as premises or, in certain cases, machinery or equipment;

- The place must be fixed, i.e., it must be established at a distinct place with a certain degree of permanence;
- The carrying on of the business of the enterprise through this fixed place of business.

The conduct of a business usually implies that certain persons run the enterprise's affairs from the fixed place. However, the OECD comments concerning automatic equipment make it clear that it is not necessary for personnel or any other human being to be present performing particular activities in order for there to be a Permanent Establishments.

A Permanent Established will also be deemed to exist where a person other than an agent of an independent status is acting on behalf of the enterprise and has, and habitually exercises an authority to conclude contracts in the name of the enterprise.

Most treaties list a number of business activities which are not considered as Permanent Establishments. The common feature of these activities is that they are, in general, preparatory or auxiliary in nature.

Electronic Commerce may pose problems for the definition of Permanent Establishments that existing tax treaties do not address. While as yet unforeseen questions are bound to arise, the current debate over what constitutes Permanent Established can be broadly summarized in the following questions:

- Whether a mere accessibility of a website from within a particular jurisdiction subjects the site-owners to income tax in that jurisdiction?
- Whether the presence of a server would constitute a Permanent Establishments?
- Whether a consumer's computer constitutes a Permanent Establishments?
- Whether the provision of services by an Internet Service Provider (ISP) would constitute a Permanent Establishments?

Treaty negotiators will have to examine these questions to see how treaty concepts can be applied to new ways of doing business.

a. Web Site

The most obvious question concusses the ability to access a website from within a particular taxing jurisdiction. In OECD countries, a mere existence of technical equipment is insufficient for creating a PE. Article 7 of the OECD Model

Treaty provides that an enterprise of a contracting state is generally exempt from tax on its profits derived from business carried on in the other contracting state unless these profits are attributable to a Permanent Establishments located in that other contracting State. Article 5 defines a Permanent Establishments. The Model Treaty also lists business premises which constitute Permanent Establishments and if we were to characterize these examples, it is likely that we would conclude that a physical presence of some permanence is common to all.

A website has no actual physical presence, but rather is highly mobile, borrowing only the presence of the server where it happens to reside at the moment. No employees need be present in the country to maintain the site. To the extent that advertising and ordering functions are perforated, the website is analogous to mail order catalogue or a television advertisement, infomercial or home shopping channel. Mere solicitation, without more, does not create a Permanent Establishments under existing principles, and it should not, when effectuated through Electronic Commerce. To the extent that a customer can view stack or data, the website is analogous to a location being maintained solely for the purposes of storage, display or delivery. Moreover under existing principles, electronic content that resides on a server only temporarily should not be a PE. For example, the construction rules reflect this concept of duration and require the presence of project activities, including the presence of a workforce, in-country for twelve consecutive months.

So does the fact that consumers can place orders through a foreign firm's website subject that firm to income taxes in the country where the customer lives? The answer to that question, in my opinion, is certainly "no". To say that the ability to access a website, without some other more substantial contact, is sufficient to constitute a Permanent Establishments is to say that online businesses are liable for income taxes in every country where their customers happen to reside. A website cannot be considered as a Permanent Establishments and such a principle is also virtually unenforceable. It would be more useful to tie the presence of a homepage to some physical equipment, namely its host computer. And that takes us to the second debate, namely whether a serer constitutes a Permanent Establishments.

b. Servers

A second, more complex, question arises regarding the location of computer file servers: should the mere presence of a server in a particular taxing jurisdiction be considered sufficient contact to constitute a Permanent Establishments? In most cases, the existence of a foreign owned server does not require employees to be present in the host country – traditionally a prerequisite for Permanent Established. This issue can be analyzed under four sets of circumstances:

- Where a server is used merely for advertising.
- Where the server is used for advertising and taking orders.
- Where the server is used for advertising taking orders and accepting payment; and
- Where the server is used for advertising, taking orders and accepting payments and for digitized delivery of goods.

In the first case, a server will not be held to be a Permanent Established. Exception 5(4)(a) of the OECD MC will be attracted in this case where the use of a facility solely for the purpose of storage, display or delivery of goods or merchandise belonging to the enterprise will not amount t the existence of a Permanent Establishments. It could also be exempt under Article 5(4)(c) of the OECD MC, which exempts the maintenance of a fixed place of business solely for the purpose of carrying on, for the enterprise, any activity of a preparatory or auxiliary character from the ambit of Permanent Establishments. In the second and third case, it may possibly be held that the server is a PE. In the last case, there is an even stronger cause to hold the server to be a Permanent Establishments. However, an attempt to tax the server as Permanent Established will not serve any purpose as it is very easy to shift the server to a tax haven or to a low tax country. Further, difficulty will arise where a number of mirror websites on different servers located in different countries are used so that a customer can be directed to any one of these sites. Yahoo, for example, uses a number of mirror sites so that the users can have better access to its very heavily visited site.

c. The User's Computer as Permanent Establishments

A view could be taken that the location of a computer who initiates the contract from his computer would constitute a Permanent Established for the non-resident. However, that place is only a location from which one logs on and is unlikely to be fixed. For example, a customer may access a web site through a mobile computer. This may even be outside the country.

Thus, the question of whether by simply accessing a website, a computer transforms itself into a Permanent Establishments of the owner of the website, is unlikely to be answered in the affirmative. It would lead to a situation where everyone with a web page would have a Permanent Establishments in every country. Further, the question of enforcement would remain unanswered.

d. I nternet Service Provider

Agency issues may also be clarified as they relate to the conduct of e-commerce. For example, some national governments will likely argue that a domestic Internet Service Provider, by connecting consumers to a foreign business's website, acts as an agent for the purposes of determining the existence of Permanent Establishments.

The ISP merely acts an intermediary between a non-resident seller and the customers in the source country. Therefore, the Internet Service Provider will not qualify as the agent of the non-resident seller. Since the Internet Service Provider acts on behalf of several website owners, even if it is treated as an agent, it would be an independent agent. Therefore, it will not constitute a Permanent Establishments. Even if it acts for only one website owner, it does not have the authority to conclude contracts on behalf of the website owner, which is an essential pre-requisite before it can be considered to be the owner's Permanent Establishments.

8.6 Technical Advisory Group

The Technical Advisory Group (TAG) on Treaty Characterisation Issues arising from Ecommerce was set up by the OECD Committee on Fiscal Affairs in January 1999 with the general mandate "to examine the characterisation of various types of electronic commerce payments under tax conventions with a view to providing the necessary clarifications in the Commentary."

When originally set up in early 1999 the Technical Advisory Groups (TAGs) were given a two-year mandate to allow them time for a consideration of a range of tax policy and tax practice issues. The involvement of non-OECD economies and the private sector was designed to ensure that the types of policy and administrative solutions being developed were both compatible with current and emerging business models and, as far as reasonably possible, globally applicable. It was recognised at the outset that the business participants had a key role to play, bringing to the debate valuable business and technological knowledge and expertise. Further, it was also recognised that given the global nature of e-commerce, participation of non-member economies in the process was vital. Five TAGs were created:

- The Consumption Tax TAG focused on advising on the practical implementation of the Ottawa principle of taxation in the place of consumption. The TAG brought valuable business perspectives to the debate on alternative collection mechanism options, and on how indirect taxation systems might be streamlined and simplified in the context of e-commerce.
- The work of the Treaty Characterisation TAG involved primarily a consideration of the application of the definition of royalties in the context of e-commerce.
- The Business Profits TAG examined how the current tax treaty rules for the taxation of business profits apply in the context of e-commerce and proposals for alternative rules.
- The Professional Data Assessment TAG focused upon an examination of the feasibility and practicality of developing internationally compatible information and record-keeping requirements and tax collection arrangements.
- The Technology TAG provided, in the main, expert technological input into the work of the other TAGs.

All of the TAGs provided valuable input into the wider OECD led process. The non-member and business input into the policy development process proved very important in helping to identify more soundly-based and widely acceptable policy positions.

Composition of the Consumption Tax TAG

The members of the Consumption Tax Technical Advisory Group (CT TAG) were drawn from countries with a broad geographical spread and the government representatives included non-OECD members. The business members were drawn from a wide range of industries. The role of the CT TAG was to work through its mandate. From an early stage, it was agreed by both the business and government members of the CT TAG that the TAG could best support the process as a whole if it functioned predominantly as a mechanism for identifying business concerns and priorities. In practice, this approach facilitated an iterative dialogue between the TAG and the Sub -group. In this mode, the TAG was able more readily to offer responses to papers from the Sub-group, as well as generate its own ideas, which directly reflected business thinking. The Sub-group found this a productive way to get feedback and input from the TAG, and has reflected such input in the WP9 Report15 to the Committee on Fiscal Affairs (CFA).

The Ottawa Framework states as a broad principle that taxation should take place in the jurisdiction where consumption takes place. In its deliberations, the entire CT TAG noted early on that it would not be possible to identify or trace every individual event of consumption and that it would be necessary to identify a less precise, but more practical and workable test by which to identify which country's consumption tax is due on a particular transaction. The business members came to the conclusion, later supported by the government members, that the most practical solution is to look at the customer's permanent address or usual place of residence. This led to consideration of what constitutes adequate verification of usual place of residence. Government members expressed concern that it would be difficult to accept customer provided information without a means of verification. Business members felt strongly that companies should be able to rely on the best information available at the time of a transaction, noting that verification requirements that delayed completion of a transaction or resulted in substantial costs unrelated to the normal course of business would undermine the growth of e-commerce and be inconsistent with the principles adopted at Ottawa. Business members suggested that the quality of information available at the time of a transaction is expected to evolve over time. In the short term, businesses might have to rely on such factors as customer attestation, credit card billing address as provided by the customer, the language of the digitized goods or services being delivered, or the target market for digitized goods or services. In the longer term,

much more robust verification options may be available, including options that enable the identification of the income tax residence of the purchaser.

Tax collection options

How consumption tax is collected on electronic commerce is clearly a key issue, and both the business members of the CT TAG and the government members of the Sub-group spent considerable time working on this topic. Both groups acknowledged that there is no "easy" solution to be found, at least for business-to- consumer (B2C) online transactions. It was agreed as common ground that a "self-assessment" or "reverse charge" mechanism is a logical way for tax on business-to-business (B2B) transactions to be collected. With respect to B2C transactions, the key points are noted as under:

a) Consumer self-assessment, both business and non-business

The CT TAG agreed that self-assessment for business customers is a simple, highly desirable mechanism for taxing business-to-business transactions. With respect to private customer transactions, it was agreed that consumer self-assessment is not likely to be an effective tax compliance mechanism in the near term. However, the business members recommended that the self-assessment model continue to be reviewed in light of emerging technologies and changing business models. Due to technological changes driven by other factors (such as privacy, fraud and piracy prevention) consumer self-assessment might in the future become a viable means of collecting consumption tax, and an open mind should be kept as to its potential feasibility.

b) Registration of non-resident suppliers

The CT TAG agreed that for this model international co-operation would be necessary to make compliance by vendors enforceable. Until such mechanisms are available, the business members pointed out, registration and compliance procedures should be as straightforward and simple as possible – see also the Simplified Interim Approach (SIA). In particular, expensive and cumbersome fiscal representative procedures should not be enforced. The business members also noted that, in time, a registration model might be combined with "trusted third party" models which are in course of development. Options should be kept open for vendors to use such models in due course.

c) Tax at source and transfer

The CT TAG agreed that the tax at source and transfer model would entail an extremely high level of international co-operation between tax authorities, and as such might not only be unrealistic in the near term but difficult to achieve in the long term. The most significant limitation of this discussion is that it focuses on a relatively narrow way in which this type of approach may work and, thus, may prematurely conclude that there is little potential here.

d) Withholding by third parties

In response to the publication of the Technology TAG paper, a number of financial services companies – (particularly credit card companies) have submitted papers to the OECD, identifying a number of significant issues and concerns. The Consumption Tax TAG welcomes this information, and to the extent points discussed below are contrary to points made in these submissions, it would defer to those other papers. The TAG agrees with the Technology TAG's conclusion that the suggested framework is unrealistic.

8.7 Summary

A taxpayer is generally taxed on its worldwide income in the country of its residence. In the case of a company, this is usually the place where the company is incorporated, registered, or has its place of central management and control.

The company may also be taxed in another country if it has a recognized source of income there (source based taxation). Generally tax treaties restrict the use of domestic source rules by requiring a minimum nexus to allow taxation in that jurisdiction. Thus, taxation of business income on the basis of the source rule requires the presence, in the country of source, of a Permanent Establishment of the enterprise sought to be taxed.

Where the income or capital is taxed in the country of source, the country of residence has the obligation to give relief from double taxation. Such relief is granted either by exempting such income from taxation in the country of residence or by giving credit for taxes paid in the country of source.

Under the tax treaties based on OECD Tax Convention, an enterprise providing services abroad is taxable in the country where it conducts business only if it has PE there. For most tax treaty purposes, a 'Permanent Establishment' is a "fixed place of business through which an enterprise carries on business. A

Permanent Establishment presupposes 'a fixed place of business' which may include premises, facilities or installations. The characteristic 'fixed' demands a specific fixed long-term connection between the place of business and a specific part of the earth's surface.

8.8 Self-Assessment Test

1. What are various important problems which are faced in the International taxation of e-commerce?
2. Discuss the rule of Permanent Establishment.
3. What constitutes Permanent Establishment for the purposes of electronic commerce?
4. Discuss the role of Technical Advisory Group in taxation of e-commerce.
5. State the Composition of the Consumption Tax TAG.

8.9 Suggested Readings

- Jonathan Bick, "Implementing E-commerce Tax Policy"
- "Tax Treaty Characterisation Issues arising from E-commerce", Report to Working Party No. 1 of the OECD Committee on Fiscal Affairs, by the Technical Advisory Group on Treaty Characterisation of Electronic Commerce Payments.
- Clayton W. Chan, "Taxation of Global E-Commerce on the Internet: The Underlying Issues and Proposed Plans"
- Kirti and Namrata Agrawal, "Impact of E-commerce on Taxation"
- Barrett Schaefer, "International Taxation of Electronic Commerce Income: A Proposal to Utilize Software Agents for Source-Based Taxation"

Unit-9
Tax Issues: Indian Perspectives

Objectives:

After going through this Unit you should be able to understand:

- Indian tax policies on e-commerce.
- Basic principal of taxation in India.
- Various types of taxes in India.

Structure:

9.1 Introduction
9.2 Basic Principles of Taxation
9.3 Basis of Taxation in India
9.4 Tax policy of E-Commerce Transactions in India
9.5 Initiatives Taken by the Indian Government
9.6 Policies Adopted by Indian Tax Authorities
9.7 Summary
9.8 Self-Assessment Test
9.9 Suggested Readings

9.1 Introduction

E-commerce is challenging the adequacy and fundamental validity of the principles of international taxation, such as physical presence, place of establishment, and valuation. In India the High Powered Committee (HPC) was constituted by the Central Board of Direct Taxes. The HPC is of the view that domestic e-commerce does not raise new issues for direct taxation. The Group is of the view that in order to reduce evasion, India should form rules, which are consistent with globally accepted norms. When rules have been relaxed and liberalization allowed taking its own form, it has led to a constructive response from foreign parties. Creating a trust-based environment is better than creating a draconian legislation, since it will encourage multinationals to continue

outsourcing work to India. An important illustration of the above fact is the liberalization of exchange controls. It is seen that the Indian as well as foreign investors have responded well to the liberalisation and there has been a higher foreign exchange inflow, which has been reflected in the current foreign exchange reserves.

The Internet has changed many of the fundamental and long standing concepts of direct and indirect taxation. Governments all over the World are grappling with the various issues of taxation raised by e-commerce. This is because of lack of comprehensive understanding of:

- The communication technologies
- The complex nature of business offered through Internet business, etc.
- The modus operandi of Internet business, etc. has made the operation of tax legislations more difficult.

9.2 Basic Principles of Taxation

Several basic principles form the foundation of taxation policy in any country. The most important of these principles are efficiency, equality, certainty and positive economic effect. If the tax system disregards these principles it is fatally defective. The efficiency principle encompasses notions of both fiscal and economic efficiency. An economically efficient tax system should be neutral and not influence one's economic behaviour simply because of the manner in which the tax is levied. An ideal tax system is also equitable in its application. Not only does it treat taxpayers in similar economic circumstances similarly but also it makes suitable distinctions in its treatment of those in different economic situations. It necessarily raises questions of “similar economic circumstances”, certainty in the tax laws is a fundamental principle in the establishment of ideal tax structure because predictability of tax consequences is an essential component of other basic tax principles. Finally, taxation has always been a mechanism for stabilisation and regulation of the economy. Recognising this fact, legislature has emphasised the economic effects of the principle of taxation, with a particular focus on encouraging economic growth.

For the development of rational tax policy one should understand the nature of industry. Some of the peculiarities of Internet are-

- It is a network of networks and it cannot be controlled or owned by one person.
- This network of networks is capable of rapidly transmitting packets from one computer to another.
- No human involvement is necessary to transmit data from one computer to another.
- The Internet can re-route itself if one computer is connected to the net. Content wise the Internet is very rich.
- The world-wide web environment provides a user friendly graphical interface.
- A simple click is sufficient to obtain vast information anywhere in the World.
- It encompasses all territorial and geographical limitations

Keeping these unique qualities of the Internet in mind one should try to visualise the issues concerning the taxes on the net. In cases of cross-border e-commerce transactions, the tax issues are more complex. A few important problems which are faced in the International taxation of e-commerce are:-

1. There are no separate rules for taxation of electronic transactions.
2. Due to the absence of physical activity, it may be difficult to determine the place of the transaction and the source of income.
3. It may be difficult to trace the person who is responsible for entering into the transaction.
4. E-commerce may result in avoiding the "withholding tax", due to payment being made by electronic means eg. Credit card etc.
5. Whether a website, server, telecommunication equipment, local access numbers, etc. constitute a permanent establishment or not, or should the source based taxation or the residency based taxation be applied to an E-transaction?

9.3 Basis of Taxation in India

There are three pillars of International taxation in India, namely:-

- **Jurisdictional Nexus** - The prime principal which determines whether tax can be levied on the commerce or not within territorial jurisdiction of India is defined.
- **Source of Income** - The Source based taxation rule provides authority to tax the income in the source country, i.e. the profit from e-commerce transactions shall be taxed in the country of its origin.

- **Status Principle** – Resident, Non-resident or Not ordinary resident principle determines whether the person is eligible for taxation in India on its global income or Indian income only.

E-commerce raises twin problems, the determination of the character of the income that is generated by the e-commerce transaction: is it royalty, business profit, or fees for technical services? The other more tricky area is the determination of income liable for tax. This necessitates the establishment of the existence of a Permanent Establishment. This would also bring us to the critical area of the transfer pricing and determination of arm's length price for transfer of goods and services. India being an emerging market, all multinational companies are creating their presence in India, either through their BPOs or through subsidiaries, affiliates etc. in India. A large number of transactions are conducted electronically, especially by the BPO's. India is therefore, facing the onslaught of huge litigations on the taxation issues thereof.

E-business for taxation is an intriguing concept. It crosses nine trillions. In these circumstances, it seems an imperative for revenue authorities to examine the approach and policy towards taxation of e-commerce more comprehensively than they have to date.

However, this examination should not be confined to the conventional topics like whether an e-merchant has a permanent establishment, how income from one line transaction should be characterised and where consumption of goods and services delivered electronically takes place, etc. These topics are considered in the context of broader study evaluating the total impact of e-transformation on business productivity, supply chain, economic cycles and sector differences. To put it in another way, revenue authorities should not simply focus upon taxation of e-commerce per se, where attention is typically focused upon the location and function of servers, characterisation of income and place of consumption. Instead, the analysis should extend more broadly to ensure a deeper understanding of the nature of e-business as it is today and as it will develop tomorrow.

In this regard, it is tempting to argue that business function will simply and suddenly disappear into cyberspace and that virtual companies will be able to operate with little presence anywhere except a site hosted by an Internet service provider in a tax-free jurisdiction.

Primarily, Internet activities are divided into two parts. One is "access service" and other is "content service". In the former, access to the Internet will be provided to the individuals whereas, in latter, content consisting of information are delivered electronically. To distinguish further Internet service provider is one who provides the service of accessing Internet whereas, Online Service Provider (OSP) is one who provides service through Internet. The service is rendered by them in return for the payment of subscription and usage fees. These are subjected to tax. The Internet encompasses content/material service, traditional retail transaction to an electronic medium, electronic commerce involving digital products. This would eventually create so many intellectual property problems.

The policies framed by the Committee on Fiscal Affairs of the Organization for Economic Cooperation and Development ("OECD") highlighted neutrality; efficiency; certainty and simplicity; effectiveness and fairness; and flexibility as guiding principles for the taxation of e-commerce transactions.

9.4 Tax Policy of E-Commerce Transactions in India

In India, the High Powered Committee ("HPC") constituted by the Central Board of Direct Taxes, submitted its report in September 2001. The report considered and contemplated upon the need for introducing a separate tax regime for e-commerce transactions. The report prepared by the HPC took into account the principles laid down by the OECD albeit with some exemptions. However, based on the principle of 'neutrality', the HPC maintained that the existing laws are sufficient to tax e-commerce transactions and no separate regime for the taxation of e-commerce transactions is required.

Indian tax authorities have been seeking to tax e-commerce and internet-based business models in a manner that conflict with international approaches. Global enterprises catering to Indian customers have faced difficulties as a consequence and there has been significant litigation in this respect, especially in relation to characterization of income and withholding taxes. Therefore, it becomes important to carefully structure e-commerce business models so as to mitigate tax risks, especially risk of taxation in more than one country.

I. Direct Taxes

Taxation of income in India is governed by the provisions of the Income Tax Act, 1961. Under the Income Tax Act, residents are subject to tax in India on their worldwide income, whereas non-residents are taxed only on income sourced in India. As per Section 9 of the Income Tax Act, certain types of income (such as interest, royalty, income from any capital asset situated in India, etc), are deemed to accrue or arise in India under prescribed circumstances. However, if a non-resident taxpayer is a tax resident of a country with which India has signed a tax treaty, he is entitled to relief under the tax treaty.

Business profits (net of permissible deductions) are taxed at 30 percent in case of resident companies and 40 percent in case of non-resident companies (to the extent of income sourced in India). Withholding tax of 25% is applicable on a gross basis in case of royalties and fees for technical services ("FTS") paid to non-residents (which could be reduced under an applicable tax treaty). In case of failure to withhold, the payer could be liable for the principal tax amount, interest (at 12% per annum) and penalty (up to 100% of the principal tax amount). Further, the payer could face the risk of not being allowed to claim expense deduction (for the royalty / FTS payment) while computing its taxable profits.

With respect to taxation of income generated by non-residents from e-commerce transactions, primarily, there are two main issues:

A. Characterization of income i.e. whether income earned with respect to the use or sale of goods (particularly items such as software and electronic databases), sale of advertising space etc is royalty or business income or capital gains, and

B. Permanent Establishment issues that may arise due to the presence of a server / other electronic terminal in India, hosting of websites or other technical equipment, etc.

A. Characterization of Income

The tax treatment of income earned by a non-resident would depend on the characterization of such income, and may be examined under the heads viz. business income, royalties or fee for professional services.

Therefore, characterization of income impacts the tax cost of doing business in India. Particularly, where characterization by Indian tax authorities is not in consonance with international principles, non-residents could potentially face the

risk of double taxation (arising from non-availability of credit for taxes paid in India).

In determining whether a payment amounts to royalty, several issues arise in the Indian context as the definition of royalty under the Income Tax Act is wider than the definition accepted internationally. The definition covers consideration received for license of computer software that does not involve the transfer of any underlying intellectual property. This deviates from internationally accepted principles which treat such license like a simpliciter sale of copyrighted books. The domestic law definition of 'royalty' also includes payments for access to or use of scientific / technical equipment even if no control / possession is granted over the equipment (for example, hosting website on third party servers without renting the server / obtaining any administrator rights over the server). This again is a deviation from internationally accepted principles which do not treat such payments as royalty unless the payer is also given control / possession over the equipment.

Further, under domestic law, payment of royalty between two non-residents is also considered to be sourced in India, if the payer utilizes the information, property or rights for a business or profession carried out in India. For example, if a non-resident licenses any IP from another non-resident for onward licensing to a resident in India, the payment made for the former license could be taxable in India, subject to relief under an applicable tax treaty. But a non-resident is entitled to the benefit of the more restricted definition of 'royalty' prescribed under tax treaties. However, India has expressed several reservations to the OECD commentary on the definition of 'royalty' and Indian tax authorities have many a times contended that tax treaty provisions should be interpreted as per domestic law definitions. We discuss below some key issues in this regard that could be faced in case of e-commerce transactions.

From the perspective of an e-commerce transaction, the issue of characterization of income becomes relevant in various circumstances, For example, payments received from residents making online purchase of digital products such as podcasts, online subscriptions, shrink-wrap software, etc., could fall within the ambit of royalty, notwithstanding that they are merely a sale of a good in electronic form. Similarly, income derived from granting rights to use a copyrighted article, for example, by way of an online copy of a book, could also be

characterized as royalty income in the hands of the recipient of income under the current domestic provisions. However, with respect to the characterization of income earned in connection with a copyrighted article versus a copyright, the position is yet not settled in a treaty situation. Additionally, add-ons and updates to existing digital products or software could also fall under the purview of 'royalty'.

As regards embedded software, the 2012 clarificatory amendment makes it clear that income generated by way of sale of embedded software would also be characterized as royalty income under the Income Tax Act; but, a different position may be taken in the context of tax treaties. As per internationally accepted principles, the license of software is considered to be incidental to the sale of the product / hardware / device in which the software is embedded and therefore, any consideration received for such license of software is clubbed with the consideration for sale of the product / hardware / device and is therefore not characterized separately. An example of embedded software could be the setting up of an integrated GSM system for mobile phones that uses both hardware and software. The Delhi High Court on two instances has taken the view that the software that was loaded on the hardware did not have any independent existence and formed an integral part of the GSM mobile telephone system and it cannot be said that such software is used by the cellular operator for providing the cellular services to its customers.

In a case involving sale of software and hardware as an integrated product, the Mumbai Tribunal held that consideration payable for the software is taxable as royalty. The tribunal came to such conclusion for the following reasons:

(i) the hardware and software were sold under separate agreements; and

(ii) license of software amounts to transfer of a right in respect of a copyright contained in a copyrighted article.

Data Warehousing

Another popular cross border e-transaction is data warehousing, which involves the storage of computer data by the customers on servers owned and operated by the providers. In this context, the Delhi Tribunal has held that where the taxpayer availed of data processing services performed by a company based out of India, for its Indian operations, then in the absence of any right to secret process that was made available by the foreign company to the taxpayer coupled with the

fact that the foreign company performed support functions using its own intellect, there can be no income in the nature of royalty.

Further, even in case of e-commerce business models involving the use of or access to different kinds of scientific / industrial equipment (for example, in case of bandwidth services, medical diagnosis, etc.), where no control / possession is granted to the service recipient, the domestic law definition of 'royalty' is wide enough to cover payments thereof. Internationally, such payments are not construed as 'royalty' unless some element of control / possession is also granted over the equipment. Therefore, while interpreting tax treaties (which override domestic law), courts have held in cases like Dell that such payments do not constitute 'royalty'. Further, in the context of online banner hosting / advertisements, in cases like Yahoo, it has been held that the payer should be able to operate the scientific / industrial equipment on its own. As the payer was not able to operate the website on its own, but was only benefitting from the advertisement being hosted by the payee on its website, it was held that the payment did not constitute royalty.

However, the Indian tax authorities have been contending that, even as per India's tax treaties, no element of control / possession is required to characterize payment for use of equipment as 'royalty'. In some case like IMT Labs and Cargo Community Network, it has been held that payment received by a non-resident from Indian customers for providing access to software/portal hosted on its server outside India is royalty, even though the non-resident did not grant any control / possession over its server to the Indian customers. This approach appears to be particularly gaining momentum in light of the 2012 retrospective amendment of the domestic law definition. Recently, in the case of Cognizant, it was held that payment for bandwidth services and router management services is 'royalty'. In interpreting the definition of 'royalties' under the applicable (India-US) tax treaty, the judgment did not follow internationally accepted approaches and instead relied upon the Income Tax Act provisions. This is in contrast with other decisions which have held that amendments made under domestic law cannot be relied upon for the interpretation of provisions in tax treaties.

In the context of characterization as FTS, in case of online auctioning websites, the Mumbai Tribunal in the case of Ebay has held that marketing support services rendered by the Indian group companies to the foreign company could not

be considered as FTS. Further, in respect of web hosting, the Mumbai Tribunal in the case of ITO v. People Interactive (P) Ltd., held that payments made by a resident to a non-resident for providing web hosting services whereby the resident does not have any access to the equipment and machines, could only be regarded as payments made for availing services. However, this view is a departure from the earlier view of courts with respect to the issue of web hosting.

There are various other e-commerce transactions which have not yet been tested in the court of law yet, and the characterization of such transactions still remains uncertain. Examples being payments made for the maintenance of software, website hosting, data warehousing, data retrieval, delivery of high value data.

In addition to software payments, e-commerce income arises from online shopping portals offering digital and tangible products, website like snapdeal.com offering and deals online and charging a commission for them, CRS websites, e-banking. In case of online platforms of tangible products, it is relatively simpler to characterize the income thereof as income from business profits. However in case of composite services like e-banking, access to paid databases, sale of digitized book issues, webhosting, etc., issues arise with respect to characterization.

B. Permanent Establishment in E-Commerce

Generally, a creation of Permanent Establishment requires the enterprise to carry out an income generating business in the other contracting state. In the context of e-commerce, due to the intangible nature of transactions, it is difficult to determine the existence of a Permanent Establishment based on the existing tests laid down for determination of a Permanent Establishment.

Internationally, merely advertising on a website about the products and services by itself would not constitute a Permanent Establishment. However, if the business is being carried out through a website and the website owner owns / has rented the server on which the website is hosted or otherwise has the server at its disposal, the server in such an instance may constitute a Permanent Establishment (as the server constitutes a “fixed place of business” of the enterprise). But, a third party website hosted on a computer server of an internet service provider should not result in the server being at the disposal of the enterprise owing the website and therefore, such hosting should not create a server Permanent Establishment. This

principle has been upheld by Indian courts in relation to advertisement revenue earned by Google and Yahoo from India.

However, Indian tax authorities have been contending a website could constitute a Permanent Establishment in certain circumstances and have expressed reservations to the OECD commentary in this regard. Some other important reservations pertain to Permanent Establishment exposure from (i) websites hosted on a third-party server which is not leased or otherwise available at an enterprise's disposal; and (ii) leased automated equipment which is not operated and maintained by the lesser enterprise post set-up. On-line reservations and bookings for airlines, trains and other travel agencies is often routed through CRS which allow real-time access airline fares, seating availability, schedules and enabling the bookings, reservations and generation of tickets. The issue of taxation of income based on the location of the CRS has been dealt with in a few judgments. The Delhi Tribunal in the cases of Galileo International and Amadeus Global Travel v. Deputy Commissioner Income Tax concluded that non-resident companies providing computerized reservation system are liable to be taxed in India to the extent of booking fees received from Indian residents. The Tribunal came to such conclusion on the ground that these companies have a "virtual" presence in India which constitutes a "virtual" Permanent Establishment.

C. Transfer Pricing Framework

i. International Transfer Pricing

Commercial transactions between related entities of multinational corporations increasingly dominate the sphere of world trade. In India, the transfer pricing regulations provide for a mechanism for computation of the Arms' Length Price (ALP) of income arising out of 'international transactions' between associated enterprises. The term 'international transaction' has been defined in an inclusive manner with retrospective effect. Important among the transactions included are the following, which were previously considered to be outside the scope of transfer pricing on account of the absence of an element of income or gain in such transaction:

- capital financing; or

- transaction of business restructuring or reorganisation, irrespective of the fact that it has bearing on the profit, income, losses or assets of associated enterprises at the time of the transaction or at any future date.

However, recently, in the second landmark Vodafone ruling, the Bombay High Court held that transfer pricing would be triggered only when an element of real 'income' is involved and that notional income or hypothetical income is not subject to transfer pricing regulations.

To reduce transfer pricing disputes arising with respect to determination of ALP, recently, safe harbor rules and Advanced Pricing Agreements have been introduced. Safe-harbour rules prescribe thresholds, satisfaction of which binds the tax authorities to accept the transfer price declared by the taxpayer. The safe-harbour thresholds notified by the government are applicable for five financial years beginning from 2012-13. Under the APA framework, taxpayers can negotiate an APA with the tax authorities for determining the ALP or specifying the manner in which it must be calculated, in relation to international transactions to be entered into by the taxpayer for a period of up to five years. Recently, APAs have been permitted to be rolled back for a period up to 4 years. An APA would be binding the taxpayer and the relevant tax authorities.

ii. Domestic Transfer Pricing

With the Finance Act 2012, the scope of transfer pricing regulations has been extended to cover certain domestic transactions with associated parties within India. Transactions with the aggregate value exceeding INR 50 million are covered and any expenditure for which payment is made or to be made to specified domestic related parties which inter-alia include a director, a relative of the director, a person having substantial interest in the taxpayer (carrying not less than 20% of the voting power) and related parties etc., will be required to be benchmarked at an arm's length price and necessary compliance /documentations would have to be followed.

II. Indirect Taxes

Various indirect taxes are levied at the central and state level. The government is taking steps to introduce a single Goods and Services Tax subsuming most indirect taxes to rationalize the indirect tax regime, to reduce the

cascading effect of multiple taxes and to reduce administrative costs of compliance with multiple taxes. Key indirect taxes levied currently are outlined below:

A. Service Tax

The service tax regime has changed drastically with the introduction of the negative list approach. Under this approach, all services, except those specified in the negative list and those specifically exempted, would be chargeable to service tax. As such the negative list prescribed does not exempt any specific e-commerce transaction. The service tax law provides that the tax shall be at a rate of 12.36% on the value of service provided or agreed to be provided in a taxable territory (i.e., India) by one person to another. Typically, the location of the receiver of service is treated as the place where service is rendered. In case of online information and database access or retrieval services, it has been specifically provided that the services would be construed to be provided at the location of the service provider.

It is pertinent to note that a) temporary transfer or permitting the use or enjoyment of any Intellectual Property Right and b) development, design, programming, customization, adaptation, up gradation, enhancement, implementation of information technology software are considered to be 'declared services' under section 65-B of the Finance Act, 1994. As per this, a temporary transfer of a patent registered outside India would also be covered in this entry, and would be taxable if the place of provision of service of temporary transfer of Intellectual Property Right is in taxable territory i.e. India. However, transfer of an Intellectual Property Right in a foreign country should not be taxable in India.

B. Sales Tax

In India, there are two types of taxes on sale of goods. Central Sales Tax (CST), which is levied by the central government, is generally payable on the sale of goods in the course of inter-state trade or commerce at the rate of 2%; intra-state sale is governed by the respective state Value Added Tax ("VAT") legislations. VAT is levied at standard rates of 0%, 1%, 5%, and 14.5% for different goods, although there may be variations in some states. In case of VAT, tax credits are available on VAT paid on input goods procured by the dealer.

In the context of e-commerce transactions, sales tax is relevant with respect to sale of intangible goods. In this regard, the Supreme Court has held that intangible goods such as software put in a tangible media, technical knowhow and

other IPRs are goods for the purpose of sales tax. It has also been held that the IP that has been incorporated on a media for the purpose of transfer and media cannot be split up. Therefore, sale of computer software falls within the scope of sale of goods and is taxable. Thus, CST as well as VAT may be applicable on the transfer of IP.

C. Customs Duty

Customs Act, 1962 governs the levy of customs duty, which can be either export duty or import duty. Customs duty is calculated is usually based on the percentage of 'value' called 'assessable value' or 'customs value'. Under the Indian law, any fees paid as royalties or license fee must be added to the customs value. In case of embedded copyrightable software, the value of the software, only if invoiced separately, is added to the valuation of the equipment for purposes of customs duty. If not invoiced separately, it would be assumed to be included in the price of the equipment package and the duty would be levied accordingly. Further, licensee fee or royalty paid for use of certain trademarks along with imported goods are also to be valued. However, payments for the right to reproduce or re-distribute imported goods should not be added to the customs value.

D. Central Excise Duty

Excise duty which is governed by the Central Excise Act, 1944, is an indirect tax levied on goods manufactured in India. It is a duty collected by the central government on manufacture of 'goods' and is levied at the time of removal from the factory. Under this, a payment towards any kind of IP is chargeable to the valuation of the goods. Valuation of the goods includes the value of engineering, development, artwork, design work and plans and sketches undertaken elsewhere than in the factory of production and is necessary for the production of such goods. Excise duty on such goods is based on the sale price of the goods. Excise duty is exempt on customized software but is payable on non-customized software which originates in India.

9.5 Initiatives Taken by the Indian Government

The Income Tax Department in India had set up a working group to examine the tax implications of e-commerce transactions. The group submitted its report in 1999. The report concluded that the existing tax laws were inadequate to

cover e-commerce transactions. It suggested that the Tax Planning and Legislation (TPL) section of the Central Board of Direct Taxes (CBDT) undertake a study on the issues arising out of taxation of e-commerce transactions.

The report stated that a computer terminal, which is used to receive and send information across national boundaries, should be regarded as a Permanent Established. The same has been said of Web sites used in e-commerce. No reasons were given in support of this stand. The report also considered the imposition of a presumptive tax in the form of a fixed portion of billings, or a "bit tax." This approach was ultimately dismissed as being too simplistic. The report considered homepages on Web sites. It observed that homepages are analogous to magazine advertisements. No tax implications arise from placing advertisements on the Internet under the existing laws. A view could be taken, however, that when the seller's homepage is downloaded at the user's computer, a fixed place of business is created at that physical site. If the Web page is downloaded often enough, the activity may be considered regular enough for it to be treated as a fixed place of business.

The report also considered Internet sales of software. In these cases, it noted, it would be necessary to examine whether supply of software was an isolated transaction or whether there is an element of continuity involved. This can be an indication of the presence of a business connection. However, to conform to the requirements of a business connection, there should be a real and intimate connection and commonness of interest between the trading activity carried on outside India and the trading activity carried on inside India. Mere purchases from abroad, on a principal to principal basis, don't establish a business connection. The report also examined the case of an Indian software vendor obtaining software on the Internet from a foreign software vendor, selling the same to Indian buyers and remitting a mutually agreed amount of the sale proceeds to the foreign vendor. In this case, since no activity is carried out by the foreign vendor in India, (apart from transmitting the software to India from abroad), no portion of the remittance can be brought to tax in India under Section 9. The report also suggested the formation of an international organization to detect any transaction on the Internet. The articles on "Mutual Agreement Procedures" and "Exchange of Information" can also form the basis of a system of dissemination of information on Internet transactions to competent authorities in various countries. Another suggestion that was considered

was the imposition of a tax on the person who gets the receipts that result in the creation of assets in the form of movable/ immovable property. The identification of the property could also be undertaken by the international organization to be set up, as suggested in the preceding paragraph. The jurisdiction to tax could be assigned to the country of the person receiving the payments. The sharing of tax proceeds could be covered by a new article in double taxation avoidance agreements.

With a view to bringing balance between providing sufficient incentives to the growth of business in the e-commerce environment and getting a fair share of revenue, the ministry of finance, government of India, has recently set up a committee for ecommerce taxation. The committee is comprised of several commissioners of income tax, a few chartered accountants, and members representing the information technology industry. The committee's mandate is to submit a report of findings on whether there are adequate provisions in the present Income Tax Act to tax the transactions in the e-commerce environment. If not, the committee is required to suggest the changes that should be made. The committee is expected to submit its report by the end of the calendar year.

9.6 Policies Adopted by Indian Tax Authorities

The Indian income tax authorities have sought to tax the booking fees, which have originated in India, as income of the CRS companies accruing and arising in India. This has been justified on the following grounds: “Laws of physics are applied to interpret the conduct of this transaction. CRSs use electromagnetic waves for communication. This requires very high velocity of transmission. In such a situation, space collapses and time stops while the transaction is conducted. As a result, the CRS host located in another country becomes one with the travel agent's computer. Hence, the host attains virtual presence in India, resulting in Permanent Established of the CRS companies in India. Therefore, the entire booking fees received by the CRS companies are taxable as their business income in India. The IMC constitute the dependant agents of the CRS companies. On account of this reason, the CRS companies will have a PE in India.”

Comments in Light of Technical Advisory Group (TAG) Report on Application of the Definition of a Permanent Established in the Context of e-

commerce In their report submitted for comments, the working party of the TAG (which was set up to consider application of the existing definition of Permanent Established) has examined and given their comments on transactions of a similar nature. The working party noted that the draft dealt solely with the interpretation of the definition of permanent establishment as currently found in the OECD Model Tax Convention. It stated that while it cannot rule out that changes could eventually be made to the existing rules, it will await the report of the TAG set up to examine the need for such a change before considering any changes regarding e-commerce.

The working party considered issues relating to the fact that no permanent establishment may be considered to exist when the electronic commerce operations carried on through computer equipment located in a country are restricted to the preparatory or auxiliary activities covered by paragraph 4 of article 5. In their view, the question of whether particular activities performed through computer equipment fall within paragraph 4 needs to be examined on a case-by-case basis with regard to the various functions performed by the enterprise through that equipment. Examples of activities which, by themselves, would generally be regarded as preparatory or auxiliary include:

- providing a communications link -- much like a telephone line -- between suppliers and customers;
- advertising of goods or services;
- relaying information through a mirror server for security and efficiency purposes;
- gathering market data for the enterprise; and
- supplying information.

If the communication equipment situated at a given location in another country is owned by the user (who is not in the telecommunication business), there is no permanent establishment not because there is no fixed place of business, but rather because the activities performed there are preparatory and auxiliary. Some of the members have drawn a parallel with the use of other communication facilities, such as the use of telephone lines to conclude a transaction. These members are of the opinion that the essential business activity of an enterprise that sells certain products -- physical or in the form of software -- is the selling of the

product itself. The communication tools used in the selling process should make no difference, whether the transaction is concluded by mail order, by telephone, or through a server connecting the computer (Web site) of the selling enterprise with the computer of the customer. Thus, only in exceptional cases do these members see a possible permanent establishment for this category, for example, if the relevant transaction (the conclusion of a contract, the payment, and the delivery of the goods) is handled fully (automatically) by the server itself.

Currently there is no single agreed framework in place for the countries. Each county has its own independent and separate Legal and Taxation framework for e-commerce. While some states like EU already have the G.S.T framework in place, others like India have V.A.T while still others like U.S.A have retail taxation structure. Therefore tax on e-commerce is only an extension of the current tax laws. A comprehensive framework for e-commerce transactions has to be evolved. The Income Tax Act 2000" has to be revisited. Some of the loopholes in the Income Tax Act like ambiguity regarding the legal jurisdiction of contracts involving international parties, non provision for dual-key pairs for individuals and business and issues of protection of individual rights including domain names have to be addressed. Along with the strengthening of the legal and statute framework, efficient and comprehensive infrastructure has to be built for monitoring of all e-commerce transactions. Better audit trails and authorization control has to be built along with the necessary skill up-gradation of officers of the commercial tax department. Better consumer education and co-operation between different states are imperative for efficient administration. The IT infrastructure has to seamlessly cover the transactions spread across states and even across nations. E-commerce is not only changing day by day but also branching into ever newer forms and will do so in the days to come. Nowadays mobile commerce is also building into a big business. Building new statutes, amending existing laws, constant monitoring, amending and adapting are the need of the hour. This will ensure that our State not only reaps the benefits of e-commerce technology but also generates increasing revenue for its socio-economic needs.

9.7 Summary

The area of International Taxation in India is full of controversies at every step. India is a developing economy and is drawing guidance from the various others more developed economies, which have well established judicial precedents in the matter of International Taxation. The legal system has constantly tried to catch up especially with the enactment of the various rules under the Information Technology Act to deal with a host of issues emerging from the use of internet. Indian tax authorities have been seeking to tax e-commerce and internet-based business models in a manner that conflict with international approaches.

9.8 Self-Assessment Test

1. State the problems which are faced in the International taxation of e-commerce.
2. What are the bases of International taxation in India?
3. Discuss the Tax Policy of E-Commerce Transactions in India.
4. State the various types of indirect taxes levied in India.
5. Discuss the Initiatives Taken by the Indian Government for the tax implications of e-commerce transactions.

9.9 Suggested Readings

- Anuj Tiwari, S.R. Dinodia & Co, "International Taxation of E-commerce"
- Dr. Devendra Vyas, "Social Dimensions of the E-commerce World in India"
- Laura Gordon-Murnane, "E-Commerce and Internet Taxation: Issues, Organizations, and Findings"
- Kirti and Namrata Agrawal, "Impact of E-commerce on Taxation"
- Mr. Dayana M.k, "E-commerce And Taxation"

Unit-10
Double Taxation

Objectives:

After going through this Unit you should be able to understand:

- Problem of double taxation
- Concept and object of Double Taxation Avoidance Agreements
- The impact of DTAAs in India

Structure:

10.1 Introduction
10.2 Concept of Double Taxation Avoidance Agreements
10.3 Necessity of Double Taxation Avoidance Agreements
10.4 Object Double Taxation Avoidance Agreements
10.5 Salient Features of Double Taxation Avoidance Agreements (DTAAs)
10.6 Methods of Eliminating Double Taxation
10.7 Impact in India
10.8 Summary
10.9 Self-Assessment Test
10.10 Suggested Readings

10.1 Introduction

In the era of globalization, liberalization and e-commerce, companies are having different functionalities from different countries which create tax related issues. For example, a company is treated as a resident of India for Indian tax purposes and taxed in India in respect of its worldwide income only if it is either incorporated under the laws of India or wholly managed from India. But in this case issue of double taxation arises. To solve this Double Taxation Avoidance Agreement ("DTAA") was introduced, according to this the residential status of a person would have to be determined in accordance with the domestic laws of

respective countries. Thus, for the purposes of the said DTAA's, in order for a company to be resident in India, it would have to be either incorporated in India or controlled and managed wholly from India. Therefore, if only a fraction of the control and management lies in India, a company would not be regarded as an Indian resident company. A company is regarded as a resident under the domestic laws of both the member nations to a DTAA, then the residential status would be determined by its place of effective management. The issue of determination of the residential status is important, since, enterprises today are globally integrated and decision makers are located in different jurisdictions. The advancement of technology has enabled the key decision makers sitting in different jurisdictions to participate in the decision making process through video conferencing and other like facilities.

Double Taxation

Where a taxpayer is resident in one country but has a source of income situated in another country, it gives rise to possible double taxation. This arises from two basic rules that enable the country of residence as well as the country where the source of income exists to impose tax, namely, (i) source rule and (ii) the residence rule. The source rule holds that income is to be taxed in the country in which it originates irrespective of whether the income accrues to a resident or a nonresident whereas the residence rule stipulates that the power to tax should rest with the country in which the taxpayer resides. If both rules apply simultaneously to a business entity and it were to suffer tax at both ends, the cost of operating in an international scale would become prohibitive and deter the process of globalization.

International double taxation has adverse effects on the trade and services and on movement of capital and people. Taxation of the same income by two or more countries would constitute a prohibitive burden on the tax-payer. The domestic laws of most countries, including India, mitigate this difficulty by affording unilateral relief in respect of such doubly taxed income (Section 91 of the Income Tax Act). But as this is not a satisfactory solution in view of the divergence in the rules for determining sources of income in various countries, the tax treaties try to remove tax obstacles that inhibit trade and services and movement of capital and persons between the countries concerned. It helps in improving the general investment climate. The double tax treaties (also called

Double Taxation Avoidance Agreements or "DTAA") are negotiated under public international law and governed by the principles laid down under the Vienna Convention on the Law of Treaties. It is in the interest of all countries to ensure that undue tax burden is not cast on persons earning income by taxing them twice, once in the country of residence and again in the country where the income is derived. At the same time sufficient precautions are also needed to guard against tax evasion and to facilitate tax recoveries. In view of the above discussion, the article attempts to evaluate various facets of bilateral Double Taxation Avoidance Agreements (DTAAs) with particular reference to India's network of DTAAs as a tool of tax coordination used by nations to distribute rights to tax different bases in the global fiscal commons. Thus, Double taxation avoidance Agreements (DTAA) become very significant.

10.2 Concept of Double Taxation Avoidance Agreements

One of the most deeply protected jurisdictions of a country is its fiscal jurisdiction. Therefore, in the era of globalization, double taxation continues to be one of the major impediments to the development of international economic relations. An individual who earned income has to pay income tax in the country in which the income was earned and also in the country in which such person was resident. As such, the liability to tax on the aforesaid income arises in the country of source and the country of residence. The Fiscal Committee of OECD in the Model Double Taxation Convention on Income and Capital, 1977, defines double taxation as 'the imposition of comparable taxes in two or more states on the same tax payer in respect of the same subject matter and for identical periods'. Whereas a tax payer's own country (referred to as home country) has a sovereign right to tax him, the source of income may be in some other country (referred to as host country) which also claims right to tax the income arising in that country. Nations are often forced to discuss and settle the claims of other nations by means of double taxation avoidance agreements, in order to bring down the barriers to international trade. Double tax treaties are settlements between two countries, which include the elimination of international double taxation, promotion of exchange of goods, persons, services and investment of capital. This is because; the interaction of two tax systems of two different countries can result in double

taxation. Every country seeks to tax the income generated within its territory on the basis of one or more connecting factors such as location of the source, residence of taxable entity and so on. Double Taxation of the same income would cause severe consequences on the future of international trade. Countries of the world therefore aim at eliminating the prevalence of double taxation. Following the footsteps of most countries of the world that levy tax on income / capital, India has also imposed Income Tax on the "total world income" i.e. income earned anywhere in the world. The result is that income arising to a resident out of India is subjected to tax in India as it is part of total world income and, also in host country which provides the source for that income. In order to avoid the hardship of double taxation, Government of India has entered into Double Taxation Avoidance Agreements with several countries. The statutory authority to enter into such agreements is vested in the Central Government by the provisions contained in Section 90 of the Income Tax Act in terms of which India has entered into agreements of this nature which deal with different types of income which may be subjected to double taxation. Therefore, Double Tax Avoidance Agreements comprise of consensus between two countries aiming at elimination of double taxation. Double Taxation Avoidance Agreements between two countries would focus on mitigating the incidence of double taxation. It would promote exchange of goods, persons, services and investment of capital among such countries. These are bilateral economic agreements wherein the countries concerned assess the sacrifices and advantages which the treaty brings for each contracting nation. DTAAs taken care of technical know-how and service fees, reduced rates of tax on dividend, interest, and royalties received by residents of one country from other. When the rate of tax is higher in the Indian Income Tax Act, 1961 than the rate prescribed in the DDTA, then the rate prescribed in the DDTA shall be applied i.e. the rate which is better to the taxpayer would be applied. Depending on their scope, double taxation avoidance agreements are classified as Comprehensive and Limited. Comprehensive DTAAs are those which cover almost all types of incomes covered by any model convention. Many a time a treaty covers wealth tax, gift tax, surtax. etc. While comprehensive Double Taxation Agreements provide for taxes on income, capital gains and capital, Limited Double Taxation Agreements refer only to income from shipping and air transport, or estates, inheritance and gifts. Comprehensive agreements ensure that the taxpayers in both

the countries would be treated equally, in respect to problems relating to double taxation.

10.3 Necessity of Double Taxation Avoidance Agreements

Double taxation is the systematic imposition of two or more taxes on the same income (in the case of income taxes), asset (in the case of capital taxes), or financial transaction (in the case of sales taxes). It refers to taxation by two or more countries of the same income, asset or transaction, for example, income paid by an entity of one country to a resident of a different country. The double liability is often mitigated by tax treaties between countries. Therefore, double taxation can be defined as the levy of taxes on income / capital in the hands of the same tax payer in more than one country in respect of the same income or capital for the same period. The problem gets complicated since taxation schemes of different countries contain divergent notions regarding definition of income as source. The position becomes anomalous in a situation where an assessee residing in one country earns income in another country, and the tax rates in both the countries are higher than 50%. If taxed at both places on the same income the assessee will be left with a negative income. This is bound to affect the economic growth.

To avoid such a hardship to individuals and also with a view to seeing that national economic growth does not suffer, Double Taxation Avoidance Agreements (DTAA) is entered into with other countries. Such tax treaties, therefore, serve the purpose of providing full protection to tax payers against double taxation and thus prevent the discouragement which double taxation may provide in the free flow of international trade and international investment. Besides, such treaties generally contain provisions for mutual exchange of information and for reducing litigation. Therefore, the need for Agreement for Double Tax Avoidance arises because of conflicting rules in two different countries regarding chargeability of income based on receipt and accrual, residential status etc. As there is no clear definition of income and taxability thereof, which is accepted internationally, an income may become liable to tax in two countries. In such a case, the two countries have an Agreement for Double Tax Avoidance, in which case the possibilities are:

1. The income is taxed only in one country.

2. The income is exempt in both countries.
3. The income is taxed in both countries, but credit for tax paid in one country is given against tax payable in the other country

In India, the Central Government, acting under Section 90 of the Income Tax Act, has been authorized to enter into double tax avoidance agreements with other countries. The object of a Double Taxation Avoidance Agreement is to provide for the tax claims of two governments both legitimately interested in taxing a particular source of income either by assigning to one of the two the whole claim or else by prescribing the basis on which tax claims is to be shared between them. The need and purpose of tax treaties has been summarized by the OECD in the 'Model Tax Convention on Income and on Capital' in the following words: 'It is desirable to clarify, standardize, and confirm the fiscal situation of taxpayers who are engaged, industrial, financial, or any other activities in other countries through the application by all countries of common solutions to identical cases of double taxation'.

10.4 Object Double Taxation Avoidance Agreements

The objectives of double taxation avoidance agreements can be enumerated in the following words:

First, they help in avoiding and alleviating the adverse burden of international double taxation, by -

a) laying down rules for division of revenue between two countries;
b) exempting certain incomes from tax in either country;
c) reducing the applicable rates of tax on certain incomes taxable in either countries.

Secondly, and equally importantly tax treaties help a taxpayer of one country to know with greater certainty the potential limits of his tax liabilities in the other country. Still, another benefit from the tax-payers point of view is that, to a substantial extent, a tax treaty provides against non-discrimination of foreign tax payers or the permanent establishments in the source countries vis-à-vis domestic tax payers. Treaties must help in avoiding and alleviating the burden of double taxation prevailing in the international arena. The tax treaties must clarify and help the taxpayer to know with certainty of his potential tax liability in other country where he is carrying on industrial or other activities. Tax Treaties must ensure that

there is no discrimination between foreign tax payers who has permanent establishment in the source countries and domestic tax payers of such countries. Treaties are made with the aim of allocation of taxes between treaty nations and the prevention of tax avoidance and/or tax evasion. The treaties must also ensure that equal and fair treatment of tax payers having different residential status, resolving differences in taxing the income and exchange of information and other details among treaty partners. Moreover, DTAAs serve at least four other important coordination functions. First, they ensure that countries adopt common definitions for factors that determine taxing rights and taxable events. Crucial among these is the definition of a permanent establishment. Most treaties also specify a Mutual Agreement Procedure (MAP) which is invoked when interpretation of treaty provisions is disputed. Third, to prevent abuse of treaty concessions, treaties increasingly incorporate restrictions and rules, such as a general anti-avoidance rule (GAAR), that allow tax authorities to determine if a transaction is only undertaken for tax avoidance or not. Benefit limitation tests and controlled foreign corporation (CFC) rules also place limits on claims of residence in countries eligible for treaty concessions. Fourth, exchange of tax information on either a routine basis or in response to a special request is provided for in most treaties to assist countries counter tax evasion. A fifth area, assistance in collection of taxes, is present in some treaties that follow the OECD Model Convention. However, two related OECD conventions (one a multilateral convention) for tax collection assistance also serve as the basis for separate bilateral agreements between some countries.

10.5 Salient Features of Double Taxation Avoidance Agreements (DTAAs)

DTAAs (a) provide reciprocal concessions to mitigate double taxation, (b) assign taxation rights roughly in accordance with that "existing consensus" described below and (c) largely though not rigidly follow the OECD Model Tax Convention or, for developing countries, the UN Tax Convention. Recent treaties contain new clauses following the OECD Model Tax Conventions of 2005 to 2010 which extend areas of cooperation to administrative and information issues. While current treaties deal mainly with the right to tax incomes and, occasionally, capital,

the OECD's recent Model VAT Guidelines could expand the scope of bilateral treaties in future to also cover the VAT.

A typical DTA Agreement between India and another country covers only residents of India and the other contracting country who has entered into the agreement with India. A person who is not resident either of India or of the other contracting country cannot claim any benefit under the said DTA Agreement. Such agreement generally provides that the laws of the two contracting states will govern the taxation of income in respective states except when express provision to the contrary is made in the agreement. A situation may arise when originally the tax provision in the other contracting state offered concessional treatment compared to India at a particular time but Indian laws were subsequently amended to bring incidence of tax to a level lower than the tax rate existing in the other contracting state.

Since the tax treaties are meant to be beneficial and not intended to put tax payers of a contracting state to a disadvantage, it is provided in Section 90 that a beneficial provision under the Indian Income Tax Act will not be denied to residents of contracting state merely because the corresponding provision in tax treaty is less beneficial. Some Double Taxation Avoidance agreements provide that income by way of interest, royalty or fee for technical services is charged to tax on net basis. This may result in tax deducted at source from sums paid to Non-residents which may be more than the final tax liability.

The Assessing Officer has therefore been empowered under Section 195 to determine the appropriate proportion of the amount from which tax is to be deducted at source. There are instances where as per the Income-tax Act, tax is required to be deducted at a rate prescribed in tax treaty. However this may require foreign companies to apply for refund. To prevent such difficulties Sec. 2(37A) provides that tax may be deducted at source at the rate applicable in a particular case as per section 195 on the sums payable to non-residents or in accordance with the rates specified in DTA Agreements.

Types of relief:

Relief from double taxation can be provided mainly in two ways (i) Bilateral relief (ii) Unilateral relief.

(i) Bilateral relief: -

Under this method, the Governments of two countries can enter into an agreement to provide relief against double taxation by mutually working out the basis on which relief is to be granted. India has entered into agreement for relief against or avoidance of double taxation with 77 countries up to May, 2010. Bilateral relief may be granted in either one of the following methods:

a) Exemption method, by which a particular income is taxed in only one of the two countries; and

b) Tax relief methods under which, an income is taxable in both countries in accordance with the respective tax laws read with the Double Taxation Avoidance Agreements. However, the country of residence of the taxpayer allows him credit for the tax charged thereon in the country of source. In India, double taxation relief is provided by a combination of the two methods.

(ii) Unilateral relief:-

This method provides for relief of some kind by the home country where no mutual agreement has been entered into between the countries.

10.6 Methods of Eliminating Double Taxation

The objective of double taxation can be obtained through tax treaties involving various methods or a combination of the following methods:

(i) Exemption Method:

One method of avoiding double taxation is for the residence country to altogether exclude foreign income from its tax base. The country of source is then given exclusive right to tax such incomes. This is known as complete exemption method and is sometimes followed in respect of profits attributable to foreign permanent establishments or income from immovable property. Indian tax treaties with Denmark, Norway and Sweden embody with respect to certain incomes.

(ii) Credit Method:

This method reflects the underline concept that the resident remains liable in the country of residence on its global income, however as far the quantum of tax liabilities is concerned credit for tax paid in the source country is given by the residence country against its domestic tax as if the foreign tax were paid to the country of residence itself.

(iii)Tax Sparing:

One of the aims of the Indian Double Taxation Avoidance Agreements is to stimulate foreign investment flows in India from foreign developed countries. One way to achieve this aim is to let the investor to preserve to himself/itself benefits of tax incentives available in India for such investments. This is done through "Tax Sparing". Here the tax credit is allowed by the country of its residence, not only in respect of taxes actually paid by it in India but also in respect of those taxes India forgoes due to its fiscal incentive provisions under the Indian Income Tax Act. Thus, tax sparing credit is an extension of the normal and regular tax credit to taxes that are spared by the source country i.e. forgiven or reduced due to rebates with the intention of providing incentives for investments.

The regular tax credit is a measure for prevention of double taxation, but the tax sparing credit extends the relief granted by the source country to the investor in the residence country by the way of an incentive to stimulate foreign investment flows and does not seek reciprocal arrangements by the developing countries.

10.7 Impact in India

The Indian Income Tax Act, 1961 administrate the taxation of income accrued in India. As per Section 5 of the Income Tax Act, 1961 residents of India are liable to tax on their global income and non-residents are taxed only on income that has its source in India. Recently, finance minister of India had asked the ministry of finance to review all the 77 double taxation avoidance agreements (DTAA) that the government had signed so far. The review is being done in order to comply guidelines of Organization for Economic Co-operation and Development (OECD) on sharing information on flow and parking of black money in various countries and to fulfill India's commitment at the G-20 Nations summit. OECD has blacklisted over 25 nations for tax relaxations they offer for parking funds. These include Mauritius, Cyprus, Switzerland and the Netherlands. Tax havens allow easy parking of money either through investments or deposits. They may offer a range of incentives including a nominal capital gains tax for companies to complete financial secrecy of accounts held by individuals and corporate. The principle followed in India is to tax residents on their global income and tax non-

residents on their Indian source income. However, unilateral tax credits for foreign taxes paid are allowed to residents under section 91 of the Indian Income Tax Act.

To evaluate the real economic impact of DTAAs information is needed on first, their impact on cross border income generating flows, including portfolio flows, FDI, labour, technology and know-how and cultural, education and related activity. This essentially requires the sensitivity of these activity flows to rates of return to be estimated. One key counterfactual is estimation of the quantum of flows that would take place in the absence of DTAAs so that the net impact on flows of DTAAs can be assessed. Second, the impact, in turn, of enhanced or decreased FDI flows on national income and government revenue needs to be assessed. Unfortunately, no adequate studies are available except possibly of FDI, precluding a fully satisfactory assessment of the overall impact of DTAAs. A recent India specific study of the impact of FDI on economic growth, Chakra borty and Nunnenkamp (2006), find the effect to be mixed having clearly positive effects only in the manufacturing sector though FDI flows mainly to the services sector. While acknowledging the limited scope of this study, it further reinforces skepticism about the value of DTAAs to the economy.

In the absence of clear evidence, inferences from the theoretical discussion must be given due weight. To recap, even if tax avoidance does not take place -

a) DTAAs with countries from which India receives inward factor flows are unlikely to be beneficial to India.
b) On the other hand, DTAAs with destinations for Indian outward factor flows may be beneficial to India.
c) With two way factor flows between treaty partners, outward factor flows from India will largely determine if the DTAA benefits India or not. Second, leaving aside DTAAs, it is important to note that benefits provided to inward flows can, in any case, be achieved through unilateral actions (e.g. tax holidays) without the need for signing DTAAs, though DTAAs allow for discriminatory treatment between different countries. Third, DTAAs do facilitate tax avoidance, which needs to be taken into account in assessing their benefits.

The data available leaves little doubt that India's DTAAs, whatever their impact on factor flows, because great loss of fiscal revenue due to FDI being routed through low tax countries. This is so even if reliable estimates of the quantum of revenue loss are not available. This is a matter about which policy

makers in India have shown great concern and which has received (and continues to receive) much news coverage in India during the past years.

Most treaties provide for taxpayers to elect voluntary to take advantage of treaty provisions or not. So if non-treaty withholding rates are more favourable, they can elect not to have taxes withheld at the higher rate. Even without further information about rates of tax on foreign source income in the partner countries, variation across countries of withholding rates seen in the table suggests that scope for treaty shopping exists for all four types of income. This suggests the need either for widespread revision of withholding tax rates to bring about greater uniformity, or more widespread treaty revision to introduce effective beneficial ownership clauses.

These agreements follow a near uniform pattern in as much as India has guided itself by the UN model of double taxation avoidance agreements. The agreements allocate jurisdiction between the source and residence country. Wherever such jurisdiction is given to both the countries, the agreements prescribe maximum rate of taxation in the source country which is generally lower than the rate of tax under the domestic laws of that country. The double taxation in such cases are avoided by the residence country agreeing to give credit for tax paid in the source country thereby reducing tax payable in the residence country by the amount of tax paid in the source country. These agreements give the right of taxation in respect of the income of the nature of interest, dividend, royalty and fees for technical services to the country of residence. However the source country is also given the right but such taxation in the source country has to be limited to the rates prescribed in the agreement. The rate of taxation is on gross receipts without deduction of expenses.

India has entered into a wide network of tax treaties with various countries all over the world to facilitate free flow of capital into and from India. The regime of international taxation exists through bilateral tax treaties based upon model treaties, developed by the OECD and the UN, between the Contracting States. India principally goes after the UN model convention and one therefore finds the tax-sparing and credit methods for elimination of double taxation in most Indian treaties as well as more source-based taxation in respect of the articles on ‘royalties’ and ‘other income’ than in the OECD model convention. Double Taxation Avoidance Agreements are evidently an interaction of two tax systems

each belonging to different country, which aim to mitigate the effect of double taxation. Double taxation is still one of the major obstacles to the development of inter-country economic relations. Every country seeks to tax the income generated within its territory on the basis of one or more connecting factors. By means of Double Taxation Avoidance Agreements, each country accommodates the claims of other nations within their fiscal arena to develop international trade and investments with minimal barriers. However, the international tax regime has to be restructured constantly so as to respond to the current challenges and drawbacks. It is also of great importance for India to take advantage of the current global move to greater transparency and openness by strengthening information sharing and administrative assistance provisions in its DTAAs.

10.8 Summary

Double taxation is the levying of tax by two or more jurisdictions on the same declared income or financial transaction, in the case of sales taxes. This double liability is often mitigated by tax treaties between countries. India has comprehensive Double Taxation Avoidance Agreements (DTAA) with 88 countries. This means that there are agreed rates of tax and jurisdiction on specified types of income arising in a country to a tax resident of another country. Under the Income Tax Act 1961 of India, there are two provisions, Section 90 and Section 91, which provide specific relief to taxpayers to save them from double taxation. Section 90 is for taxpayers who have paid the tax to a country with which India has signed DTAA, while Section 91 provides relief to tax payers who have paid tax to a country with which India has not signed a DTAA. Thus, India gives relief to both kind of taxpayer.'

10.9 Self-Assessment Test

1. What do you understand by double taxation? Explain the concept and object of Double Taxation Avoidance Agreements.
2. Discuss the Salient Features of Double Taxation Avoidance Agreements (DTAAs).
3. State the Methods of Eliminating Double Taxation.
4. What do mean by 'Bilateral relief' and 'unilateral relief'?

10.10 Suggested Readings

- Sarbapriya Ray, “A Close Look into Double Taxation Avoidance Agreements with India: Some Relevant Issues in International Taxation
- M.M.K. Sardana, “Evolution of E-commerce in India Taxation of E-commerce Transactions (Part 3)”
- Prof. S. M. Imamul Haque and Md Anisur Rahman, “E-Commerce in India: Issues & Remedies”
- Arindam Das-Gupta, “Economic Analysis of India's Double Tax Avoidance Agreements”
- Rifat Azam, “Global Taxation of Cross-border E-commerce Income”

Unit-11

Indian Legal Position on E-Commerce

Objectives:

After going through this Unit you should be able to understand:

- Legal provisions of various laws relating to e-commerce in India
- Government policies for e-commerce

Structure:

11.1 Introduction
11.2 Electronic Commerce Transaction
11.3 Validity and Enforceability of Online Contract
11.4 The Information Technology Act
11.5 Intellectual Property Rights
11.6 Consumer Protection
11.7 Advertising
11.8 Role of Business/Industry Associations in promoting legal awareness
11.9 Summary
11.10 Self-Assessment Test
11.11 Suggested Readings

11.1 Introduction

This unit discusses the Indian legal provisions relevant to e-commerce transaction and, for the benefit of those readers without a legal background, explains the main legal principles and terminologies that need to be understood to fully appreciate the issues of e-commerce. The issues covered include consideration of the state of evolving business practices, suggested solutions to some recoginised problems and a status report on the evolution relevant legal principles, emphasising the basics of contract and evidence law and their applicability to the creation and enforcement of binding commitments in electronic

commerce, it will be seen how the current state of the law presents some uncertainties in relation to the formation and enforcement of agreements.

11.2 Electronic Commerce Transaction

Electronic transactions are conceptually very similar to traditional commercial transactions. Vendors present their products, prices and terms to prospective buyers. Buyers consider their options, negotiate prices and terms (where possible), place orders and make payment. Then, vendors deliver the purchased products. While the precise order of these events and the mechanisms through which they are transacted vary, these activities are in principle, fundamental to both traditional and electronic commerce.

Nevertheless, because of the ways in which it differs from traditional commerce, electronic commerce raises some new legal challenges. These include:

- Satisfying traditional legal requirements for reduction of agreements to signed documents;
- Applying legal rules of evidence to computer-based information; and
- Interpreting, adapting and complying with many other existing legal standards in the context of electronic transactions.

F

rom a legal perspective, one of the most significant issues in electronic commerce is how the create enforceable digital contracts for the sale of goods and services or how to ensure that a digital transaction will be at least as enforceable and valid as a traditional paper-based transaction. In every business environment, whether transactions are executed in person (face-to-face) or over distance, there are accepted customs and practices that determine, in conjunction with applicable legal rules, the parties rights and responsibilities, these practices often include controls, such as;

- Signatures, to evidence agreements;
- Time-and date-stamping, to provide proof of dispatch, submission, receipt or acceptance and
- Witnesses, notaries or other trusted third parties, to acknowledge and authenticate transactions.

The purpose of these controls is to create the necessary level of certainty in business transactions. Although electronic commerce is expanding rapidly, the development of a corresponding legal and control infrastructure has lagged behind. to create viable electronic equivalents to traditional contracting activities, it is necessary to develop legal mechanisms or supportable legal analogs, for the electronic commerce infrastructure, the goal of such mechanisms is to make electronic transactions at least as efficient, secure and legally binding as traditional commercial transactions, without forcing users to negotiate customized terms and conditions.

11.3 Validity and Enforceability of online Contract

An agreement between parties is legally valid if it satisfies the requirements of the law regarding its formation, that is, primarily, that the parties intended to create a contract. This intention is evidenced b their compliance with the three classical cornerstones of a contract: an offer of specific terms, acceptance of the offer and adequate consideration (payment) for the performance of the agreement. Notwithstanding the validity of an agreement, parties may be unable to enforce a contract unless certain other requirements have been satisfied, such as the statute of frauds (where applicable), which is described below.

Offer and Acceptance

The bargaining process must satisfy two requirements to result in a valid contract: first, mutual assent as an expression of the parties' intent to contract and second, sufficiently definite terms.

In arriving at such mutual assent and definite terms, the parties employ the mechanics of offer and acceptance. In most circumstances, the contract process is initiated by an offer. Offers are many and varied: offer to sell, offer to purchase and unilateral offers. An offer is “a manifestation of assent to enter into a bargain made by the offer or to the offer or, conditional upon a manifestation of assent in the form of some action (promises which must be accepted by a return promise (such as to sell and purchase) or an act (unilateral). The existence of a conditional promise is what separates an offer from an advertisement, price quotation or from providing information as a part of preliminary negotiation.

Consideration

A valid contract also requires that the parties bargain for consideration. Consideration may consist of either actual performance, such as delivery of goods or services or payment for them or a return promise. Although Electronic Commerce may involve novel methods of payment and delivery, as long as a transaction includes a bargain for exchange of adequately commensurate promises or performances, regardless of the manner of performance, the agreement will comply with the consideration requirement.

Compliance

Theoretically, a party's failure to perform completely and strictly in accordance with the terms of an agreement constitutes breach of contract. Indeed, with respect to the sale of goods, the law has historically embraced the perfect tender rule, a standard entitling a buyer to reject goods unless the seller strictly complies with both quality and quantity provisions of a bargain. Nevertheless, where one party has substantially performed in good faith, it would be unfair to force that party to forefeet all of his or her efforts simply because he or she has not complied with the contract fully. Thus contract law softens the harshness of the perfect tender rule (or exact compliance) in some situations.

Breach

As state above, a party's failure to perform as agreed results in a breach of contract. This includes both failures to perform according to the terms of the contract once the time for performance has arrived and the refusal to perform even before the time for performance has arrived (termed anticipatory repudiation). Depending on the nature of the breach, a contract may be void or its face, voidable by the non-breaching party or severable, meaning that certain terms might be voided without affecting the validity of others. In a case of anticipatory breach, if the non-repudiating party has fulfilled its end of the bargain, the result is a repudiating party, including the right to terminate the contract and make claims for damages.

Enforcement

One of the fundamental objectives of contract law is to protect a party which accepts a promise in a properly formed agreement from injury as a result of a breach by the party who makes the promise. Accordingly, the law affords non-breaching parties various avenues of recourse to enforce their rights under the

contract. A party which has been or stands to be, injured as a result of a breach must be able to prove the injury and the damages that flow there from in court, under the applicable rules of evidence, to enforce these remedies. **Liability and Damages**

A party which breaches an agreement may face various types of liabilities under the contract law. In contracts for the sale of unique goods or other property, a plaintiff is typically entitled to a specific performance of the contract by the defendant. An award of specific performance requires a court order demanding the defendant to deliver the goods or services to the plaintiff. Because specific performance is an extraordinary remedy, the capability to accurately identify the person whose specific performance is demanded is very important.

Where specific performance is infeasible or inappropriate, a court may award monetary damages to a plaintiff who has suffered injury as a result of a breach of contract. While various methods are used to set proper amount of damages depending on the nature of the breach, the goal of the law is generally to either restore the injured party to its pre-contract position (restitution approach) or place the injured party in the economic position it would have been in had the breaching party performed (expectation approach). This may include an award of incidental or consequential damages to compensate for expenses or losses attributable to the breach. Where a breach is committed in bad faith or through otherwise willful and malicious conduct, a court may award punitive damages. Parties may limit their exposure to liability for damage for breach of contracts by agreeing to clauses which liquidate or otherwise limit the amount of damages a party would be entitled to receive upon breach by the other.

Due to the nature of the systems and networks that business employ to conduct electronic commerce, parties may find themselves liable for contracts which technically originated with them but, due to programming error, employee mistake or deliberate misconduct- were executed and released without the actual intent or authority of the party. Sound policy situates that parties receiving messages be able to rely on the legal expressions of authority from the sender's computer and thus be able to legally attribute these messages to the sender. Similar problems arise when transmission errors result in difficulties between parties, thus giving rise to damages. Some statutory proposal would prohibit parties (as between themselves) from holding a third-party service provider or other intermediaries

liable for transmission errors or other omissions. These situations implicate the laws of agency, a seed of principles governing the authority and legal capacity of an 'agent' to act on behalf of its 'principal'.

The potential for liability due to statutory provisions for conclusive legal attribution provides additional incentive for electronic commerce participants to employ adequate security measures. In addition to employing information security mechanisms and other controls, techniques for limiting exposure to liability include:

(a) Trading partner and legal technical agreements;
(b) Compliance with recognized procedures, guidelines and practices;
(c) Audit and control programmes and reviews;
(d) Technical competence and accreditation;
(e) Proper human resources management;
(f) Insurance;
(g) Enhanced notice and disclosure mechanisms; and
(h) Legislation and regulation addressing relevant secure Electronic Commerce issues.

11.4 The Information Technology Act

The Information Technology Act, 2000 deals with contractual aspects of use of electronic records. The validity of electronic transactions is established under the Information Technology Act. The Act establishes that an ecommerce transaction is legal if the offer and acceptance are made through a 'reasonable' mode. The objectives of the Information Technology Act, as outlined in the preamble, are to provide legal recognition for E-commerce transactions. The Act lays down procedures for networking operations and for civil wrongs and offences. The Indian Information Technology Act does not have any express provision regarding the validity or formation of online contracts.

A communication sent by an offer or to an offered through indirect means, such as an email that passes multiple servers and spam mails, is not regarded as a reasonable mode under the IT act. Reasonable modes of acceptance in an ecommerce transaction are:

- Direct mail from the offered to the offer or.
- Acceptance by conduct, which is pressing an 'Accept' button to an offer.

The Information Technology Act governs the revocation of an ecommerce offer and acceptance. An ecommerce transaction is said to be complete when the offer or receives acknowledgment of the receipt of the offer. Besides, an offer or has the liberty to terminate an offer, provided its acceptance has not been communicated by the offered.

The Information Technology Act essentially seeks to address three areas or requirements for the digital era:

(1) To make e-commerce transactions possible —both business to business and business to consumer

(2) To make e-governance transactions possible —both government to citizen and citizen to government

(3) To prevent cybercrimes and regulation of the Internet

The Information Technology (Amended) Act, was amended in 2008 to increase security of e-commerce transactions, with special provisions for legal recognition of digital signatures and electronic documents. Section 43-A of Information Technology (Amended) Act holds ecommerce companies accountable for protection of personal data.

When an ecommerce company fails to protect personal data of its customers or is negligent in maintaining and implementing reasonable security practices, and if these results in wrongful loss of an online buyer, the laws are clear that its body corporate is wholly liable to pay the damages by means of monetary compensation.

Security of the information provided during the online transaction is a major concern. Under section 43-A of the Information Technology Act the "Reasonable practices and procedures and sensitive personal data or information Rules, 2011" have been proposed, which provide a framework for the protection of data in India. Data can be personal, which has been defined as "any information that relates to a natural person, which, either directly or indirectly, in combination with other information available or likely to be available with a body corporate, is capable of identifying such person." The date can also be sensitive and a sensitive personal data consists of password, financial information, physical, physiological and mental health condition, sexual orientation, medical records and history and biometric information. The entity collecting data should have a privacy policy in place, should always obtain consent from the provider of sensitive information and maintain reasonable security practices and procedures. Unauthorized access to

personal information and any misuse of such personal information should be checked by the online goods/service providers.

Interface with payment gateways is yet another challenge in online transactions. In 1995, the EFT, a retail funds transfer system enabling customers to transfer funds from one account to another and from one region to another, without any physical movement of instruments was introduced. The banks were permitted to offer internet banking facilities based on the Board-approved internet banking policy without prior RBI approval. As a step towards risk mitigation in the large value payment systems, the RTGS was made operational by the RBI in March 2004, which enabled settlement of transactions in real time, on a gross basis. The RTGS System is operated by the RBI. In 2005, NEFT was introduced which was a more secure, nation-wide retail electronic payment system to facilitate funds transfer by the bank customers, between the networked bank branches in the country. The enactment of the Payment and Settlement Systems Act, 2007 empowered the RBI to regulate and supervise the payment and settlement systems in the country, give authority to permit the setting up/continuance of such systems and to call for information/data and issue directions from/to payment system providers. The Information Technology Act provided legal recognition for transactions carried out by means of electronic data interchange and other means of electronic communication, commonly known as "electronic commerce", which involve the use of alternatives to paper-based methods of communication and storage of information. Some of the initiatives taken so far to a secured e-transaction include: The Information Technology (Amendment) Act 2008, RBI's guidelines on Mobile Banking and pre-paid Value Cards, Guidelines on Internet Banking and Mobile banking guidelines. Essentially, the IT Act has laid the foundation for strengthening cyber security and data protection in India with introduction of section 43A that mandates body corporate to implement "reasonable security practices" for protecting "sensitive personal information". The Information Technology Act formally introduces the concept of data protection in Indian law, ushers in the concept of "sensitive personal information" and provides for fixation of liability on a body corporate to preserve and protect such sensitive personal information. It also provides for civil and criminal liability for failure to protect personal data and information. Further, the RBI has mandated a system of providing additional authentication based on information encrypted on the cards

but not visible for all online transactions. Banks have also to put in place alert systems to keep a tab on online activity. Since an e-commerce website relies on an online mode of payment, several requirements imposed by the RBI do impact them but essentially the payment gateways. However, while engaging such payment gateways the contractual obligations on data protection and usage should be clearly defined.

11.5 Intellectual Property Rights

There are enormous possibilities of trade mark, copyright or patent infringements in online medium. E-commerce websites are designed and made by other parties and often the content is also created by third parties. Unless the agreements between the parties specifically provide the Intellectual Property Rights, there can be serious ownership issues of Intellectual Property Rights. Any usage of third party Intellectual Property Rights should have valid approvals in place. In interactive websites, the disclaimer and Intellectual Property Rights policy should clearly spell out these issues and goods/service providers should also keep a watchful eye on the usage of their websites regularly. Domain names have trade mark protection and deceptively similar domain names can give rise to disputes. In Satyam Info way Ltd v. Sifynet Solutions Pvt. Ltd., the Supreme Court had held that "a domain name may pertain to the provision of services within the meaning of section 2(z) of the Trade Marks Act."

Within the commercial sphere, issues of intellectual property that have had such relevance in the physical (off-line) world, involving rights in respect of patents, trademarks and copyrights, among others, also arise in relation to electronic commerce, but with different aspects to be addressed and, in many cases, shorter timeframes. Trademarks, for example, which provide consumers with an accessible symbol associated with the goodwill of an enterprise, are playing an important role in the electronic commercial environment where in-person dealings are infrequent. With respect to patents, the creative business methods that are being developed to conduct commerce over the digital networks raise new questions of patentability. Further, the shorter life cycles of many of the products and services associated with the Internet and digital technologies call for the timely acquisition and enforcement of such intellectual property rights.

For commerce involving physical products, the Internet functions as a global system facilitating sales, in which the placing of an order and the making of payment can (but does not necessarily have to) take place online, while the goods themselves are delivered separately through a postal or other delivery service. For commerce involving intangible products, the Internet serves not only as a system to promote sales, but also as a system to effectuate the delivery of the intangible product itself, such as a piece of music or software, a film or a publication. This distribution can take place almost instantaneously, and the intangible product may travel virtually without restriction across national borders. At the same time, however, there is a need for effective intellectual property protection that can address the international dimensions of this commerce.

11.6 Consumer Protection

As electronic commerce to proliferate, consumers are becoming increasingly important participant. The law frequently provides added protections for consumers against fraud and unfair trade practices by unscrupulous merchants. The relative anonymity of parties in electronic commerce heightens the potential for such problems and the need for appropriate protection. Nonetheless, there has not been a major effort to reduce consumer risks in electronic commerce from the recognized consumer advocacy organizations as yet.

The Consumer Protection Act, 1986 governs the relationship between consumers and goods & service providers and there are no specific provisions related to online transactions. Liability for a goods/service provider arises when there is “deficiency in service” or “defect in goods” or occurrence of “unfair trade practice”. The Consumer Protection Act specifically excludes from within scope any service rendered free of cost. So, if only the actual sale is taking place in the online medium, the users will be considered as consumers under the Consumer Protection Act. The goods/service providers may be asked to remove defects/deficiencies, replace the goods, return the price already paid, compensate and discontinue the unfair trade practice or the restrictive trade practice and not repeat them.

Under the Information Technology (Intermediaries Guidelines) Rules, 2011, the intermediaries have the obligation to publish the rules and regulations,

privacy policy and user agreement for access or usage of the intermediary's computer resource by any person. Such rules and regulations must inform the users of computer resource not to host, display, upload, modify, publish, transmit, update or share certain prescribed categories of prohibited information. Also, the intermediary must not knowingly host or publish any prohibited information and if done should remove them within 36 hours of its knowledge. In Consume Info Pvt. Ltd v. Google India Pvt. Ltd, the Delhi Court recognized that no injunctive relief could be granted to Consume since it did not pass the triple test of -

a) prima facie case

b) balance of convenience and

c) Irreparable hardship but here the decision of the court was greatly influenced by the fact that the trademarks in dispute were generic in nature.

The court also observed that though the intermediary, Google, cannot be made liable for infringement arising out of a third party's actions since it is not possible to always check every advertisement posted online; however, this observation was subject to section 3(4) of the aforesaid Intermediaries Guidelines and Google had to act upon it within 36 hours of receipt, failing which it may be held liable.

11.7 Advertising

Advertising is an important and legitimate means for a seller to awaken interest in his products. For long, advertisements were regulated by the courts, government, tribunals, or police that depended upon the nature of each case. Additionally, absence of a single comprehensive legislation created a lot of confusion in terms of a proper code to follow by the industry and the authority to regulate or guide the pattern of advertising. In 1985, the Advertising Standards Council of India (**"ASCI"**), a non statutory tribunal, was established that created a self regulatory mechanism of ensuring ethical advertising practices. ASCI entertained and disposed of complaints based on its Code of Advertising Practice (**"ASCI Code"**). On certain occasions, however, the ASCI orders were set aside by courts as ASCI being a voluntary association was considered usurping the jurisdiction of courts when it passed orders against non-members. Gradually, the ASCI Code received huge recognition from the advertising industry. The warnings

issued by ASCI to the advertisers against the misleading advertisements were gradually being accepted by the advertisers and the advertisements were actually stopped being aired or were modified significantly to comply with the prescribed ASCI Code. The advertisements should make truthful and honest representations and avoid false and misleading claims, should not be offensive to public decency or morality, not promote products which are hazardous or harmful to society or to individuals, particularly minors, observe fairness in competition keeping in mind consumer's interests and avoid obscene or harmful publication and indecent representation of women.

E-commerce has already generated a lot of competition with ever increasing players and acquisition of several old players in the market and has enabled development of new services, new distribution channels, and greater efficiency in business activities. Creation e-hubs where significant market share lies can lead to certain competition issues if they appear to have developed sustainable market power resulting from network effects and/or engaging in strategic acts to preserve or maintain their market power. Potential issues for e-commerce players would be price fixing or tacit collusion or anti-competitive discrimination or refusal of access to third parties. E-commerce players should refrain from collusion and excessive pricing. Options for parties to use same web platform for different kinds of products/services can give rise to different intermediaries and that can lead to collusive behavior.

11.8 Role of Business/Industry Associations in Promoting Legal Awareness

Security of the consumer has been a major concern in the e-commerce segment. The security aspect is not only limited to the financial transactions but is extended to unforeseen divulging of information such as email address, personal contact details etc. There are other data that a host vendor website could collect passively such as the routine/pattern of the consumer buying. This typically leads to sending bulk SMS, direct calling to consumer & theft on financial details. The role of organizations & various industries is very critical at this juncture to ensure that law is enforced properly. There are various regulations, awareness programs run by various industry associations such as FTC, Industry retailers associations,

payment card industry etc. The government of various countries has also established specific institutions for tacking the issues related to e-commerce transactions.

Different International government Associations are as follows:

- International Consumer Protection & Enforcement Network
- APEC Electronic Commerce Steering Group
- Econsumer.gov
- National Cyber Security Alliance
- Stop Think Buy
- Other organizations which play a key role in legal issues related to e-commerce are Stop Think Connect, Stay Safe online, Digital Business & Digital Europe to quote a few.

Roles of the organizations

Various roles of organizations are listed below.

Standardizing Regulations

The organizations have mandated the vendors to be compliant to the country of origin and the country of the buyer. However, there are certain discrepancies such as regulations being liberal in the country of origin compared to the country of the buyer. But these organizations have ensured that everyone involved in a transaction is under the purview of the corresponding country laws.

Standardizing Contract Format

The organizations have enforced digital signatures to ensure that a contract is signed between the vendors, the website host & the buyer. This e-contract holds the same value in terms of legal proceedings like a written contract. Hence both the parties are held liable for any actions they take.

Protection & Ensuring Authenticity

Authenticity is an important issue that we face today. To ensure authenticity of buyers and sellers, digital certificates are being used by these organizations to measure the authenticity of the website. Trustee, Verified by Visa, Norton Security, VeriSign are some of the industry organizations which play a key role in authenticating the consumer and the vendor websites.

Networking & Fraud Detection

The organizations are trying to network with as many vendors possible to find out the online fraud activities easily and have access to the alleged criminals. This act also helps in building more trust among the buyers & sellers.

Enforcement of Public Security

These organizations also emphasize on safe trade practices from home & other public places such as colleges, internet centers, theaters & movie halls. However, the enforcement of proper security has been a challenge at such a large audience.

Acts as a Bridge between buyer & Seller

Framing of Click wrap agreements – The cybercrime law is trying to make it compulsory for the user to read the agreement before proceeding for a transaction. Hence the buyer and seller could be held easily responsible for a transaction.

11.9 Summary

E-commerce is new that the legal and other policy issues that are necessary for setting up e-commerce are still evolving. These legal issues are segregated into privacy, taxation, consumer protection, intellectual property and other legal issues. The Information Technology act 2000 is the only cyber law of India, which is regulating ecommerce business and transactions in India. Copyrights, trademarks and patents have been extended to technological improvements through internet. So a trader, if registered could claim possession of any emblem, designs, codes & software & other literary works.

It is certainly a huge challenge for all the countries to agree upon a common law. Laws such as those involving protection of personal privacy and entities permitted to issue electronic money may raise difficult problems, as will those dealing with tax collections. Sale over the Internet, for example, raises questions about the location of transactions and consequently about which tax laws apply.

E-commerce activities often lead to several ways of processing personal data. To protect the privacy of the persons involved, it is important that these personal data are used with care, required for legitimate purposes, not disclosed to

the wrong persons and not processed without the knowledge of the persons concerned.

11.10 Self-Assessment Test

1. Discuss the validity and enforceability of online contract.
2. Explain the provisions relating to security of data under the Information Technology Act, 2000.
3. Discuss the issues regarding to infringements of Intellectual Property Rights in e-commerce transaction.
4. State the major consumer protection issues in consideration in e-commerce
5. State the role of Business or Industry Associations in promoting legal awareness and protecting from exploitation.

11.11 Suggested Readings

- Samtani Anil, "Electronic Commerce in Asia: the Legal, Regulatory and Policy Issues"
- Barrett Schaefer, "International Taxation of Electronic Commerce Income: A Proposal to Utilize Software Agents for Source-Based Taxation"
- Neeraj Dubey, " Legal issues in e-commerce: Think before you click"
- Anvit S Shetty, Rahul Rajkamal Pathrabe, Abhishek Ranjan Besra, Debsoumo Das, Arun Smk, "Legal Issues in E-commerce"
- Parag Diwan and Sunil Sharma, "E-commerce"

Unit -12
Role of International Agencies in E-Commerce

Objectives:

After going through this Unit you should be able to understand:

- Function and Role of international organizations in e-commerce
- Role of NGOs in E-commerce at international level
- Function of Indian Regulatory Authorities in E-commerce

Structure:

12.1 Introduction
12.2 Role of International Organizations in E-commerce
12.3 Role of National or Regional Entities in E-commerce
12.4 Role of NGOs in E-commerce
12.5 Role of Indian Regulatory Authorities in E-commerce
12.6 Summary
12.7 Self-Assessment Test
12.8 Suggested Readings

12.1 Introduction

On certain issues, such as jurisdictional rules and consumer protection, various national and international organizations play an important role in the development of e-commerce law and policy as they are often accorded a place at the negotiating and drafting table. Several organizations contribute to the development of global e-commerce law at the international level. Different organizations have tended to take the lead on different issues, the role of these organizations is more reactive, responding to new proposals and lobbying on

behalf of business or consumer interests. Role of International Agencies in e-commerce can be categorized as following-

12.2 Role of International Organizations in E-commerce

1. UNCITRAL

UNCITRAL is the United Nations Commission on International Trade Law, established by the United Nations in 1966 to harmonize the law of international trade. It is a core legal body of the United Nations system that works to create accessible, predictable and unified commercial laws.

The Commission is composed of 36 Member States elected by the General Assembly, are chosen to represent the world's various geographic regions and its principle economic and legal systems. Members are elected for terms of six years, with the terms of half the members expiring every three years. The UNCITRAL secretariat is located in Vienna and carries out its work in annual sessions, which are held in alternate years in New York and Vienna. All States and interested international organizations are invited to attend as observers and participate in sessions of the Commission and of its working groups.

Function of UNCITRAL

UNCITRAL focuses on law reform and creating model commercial laws that are both accessible and predictable. This is accomplished through:

- Conventions, model laws and rules which are acceptable worldwide
- Legal and legislative guides and practical recommendations
- Updated information on case law and enactments of uniform commercial law
- Technical assistance in law reform projects
- Regional and national seminars on uniform commercial law.

The Commission has established six working groups to perform the substantive preparatory work on a range of topics, including: international sale of goods; international transport of goods; international commercial arbitration; public procurement and infrastructure development; construction contracts; international payments; cross-border insolvency and, most important for current purposes, electronic commerce.

UNCITRAL created a Model Law on Electronic Commerce in 1996 to enhance the use of paperless communication. In 2001, it created a Model Law on Electronic Signatures. Future electronic commerce work will focus on: electronic contracting, with a view to creating a draft convention; online dispute settlement; dematerialization of documents of title; and a convention to remove legal barriers to the development of electronic commerce in international trade instruments.

2. OECD

The Organization for Economic Co-operation and Development (OECD) grew out of the Organization for European Economic Cooperation, which administered American and Canadian aid to Europe after World War II. Established in 1961, OECD today has 30 member countries and maintains active relationships with 70 more. Its goals are to build strong economies in its member countries, improve market systems, expand free trade and contribute to development in both industrialized and developing countries. The governing body of OECD, the Council, is led by a secretary-general and is made up of representatives of member countries, who provide guidance on the work of OECD committees and decide on the annual budget.

Function of OECD

OECD facilitates the creation of international instruments, decisions and recommendations in areas where multilateral agreements may create progress for individual countries in a globalized economy. Its various directorates and committees analyse issues, identify policies and deal with a wide range of economic and social issues from macroeconomics to trade, education, development and science and innovation. Among its other functions, OECD:

- has published more than 4000 publications including research reports, conventions, working papers, country surveys and statistics spanning the spectrum of socio-economic;
- promotes and develops international statistical standards and coordinates statistical activities with other international agencies;
- fosters good governance in the government and private sectors through the hosting of conferences and the development of policy and guidelines;

- identifies and analyses issues surrounding emerging economies, sustainable development and aid.

OECD's involvement with e-commerce

E-commerce has become an area of focus for OECD because of its transformer nature and its potential for all countries in the areas of economic growth, trade and improved social conditions. It has developed policy in areas ranging from telecommunication infrastructure and services to taxation, consumer protection, network security, privacy and data protection, as well as emerging markets and developing economies.

Following its "OECD Action Plan for Electronic Commerce", endorsed by its members in 1998, its work programme focus is to build trust for users and consumers; establish ground rules for the digital marketplace; enhance the information infrastructure for e-commerce; and maximize the benefits of e-commerce. Some of the activities currently under way in the area of e-commerce include:

- implementing aspects of the OECD Guidelines for Consumer Protection in the Context of Electronic Commerce;
- promoting the use of privacy-enhancing technologies and user education and awareness about online privacy issues;
- studying the effects of e-commerce on cross-border trade in financial services, on contract law and on electronic delivery of insurance products;
- studying access to high-bandwidth information and communication technologies at affordable costs in rural as well as in urban areas;
- researching the needs for and constraints to, capacity development for trade faced by developing countries; and
- disseminating its work on e-commerce to member and non-member countries through other international organizations.

3. WIPO

The World Intellectual Property Organization (WIPO) is an international organization that promotes and protects original works in the realms of art, science and technology.

Headquartered in Switzerland, WIPO is one of the 16 specialized agencies of the United Nations. It administers 23 international treaties dealing with different aspects of intellectual property protection (both industrial protection and copyright) and has more than 170 Member States.

Although WIPO was formed in 1970, its roots go back as far as the 1883 Paris Convention for the Protection of Industrial Property. In 1974, WIPO became a specialized agency of the United Nations with the mandate to administer intellectual property matters recognized by the Member States of the United Nations.

Function of WIPO

WIPO's main objective is to develop international standards for the protection of intellectual property in keeping with ongoing advances in technology and business. Through its treaties, it seeks to:

- harmonize national intellectual property legislation and procedures;
- provide services for international applications for industrial property rights;
- exchange intellectual property information;
- provide legal and technical assistance to developing and other countries;
- facilitate the resolution of private intellectual property disputes; and
- Marshal information technology as a tool for storing, accessing and using valuable intellectual property information.

WIPO's Role in E-commerce

WIPO has created a Digital Agenda to respond to the confluence of the Internet, digital technologies and the intellectual property system. Through international discussions and negotiations, WIPO is formulating new ways in which intellectual works can be disseminated, while at the same time ensuring the rights of their creators remain protected. The Digital Agenda also aims to:

- integrate developing countries into the Internet environment through such tools as the use of WIPOnet and the electronic delivery of information and services;
- rethink how intellectual property law works in Internet transactions and examine emerging new norms in this respect;

- facilitate the creation of effective online systems to resolve disputes; and
- Coordinate and ensure the development of efficient and consistent responses to common concerns across national and multi-sect oral boundaries.

4. ICANN

The Internet Corporation for Assigned Names and Numbers (ICANN) is a technical coordination body for the Internet. Created in October 1998 by a broad coalition of the Internet's business, technical, academic and user communities, ICANN has assumed responsibility for a set of technical functions previously performed under United States Government contract by other groups.

As a non-profit, private-sector corporation, ICANN is dedicated: to preserving the operational stability of the Internet; to promoting competition; to achieving broad representation of global Internet communities; and to developing policy through private-sector, bottom-up, consensus-based means. ICANN welcomes the participation of any interested Internet user, business or organization. The Board of ICANN is currently composed of nineteen directors: nine at-large directors, nine selected by ICANN's three supporting organizations and the president/CEO (*ex officio*). Five of the current at-large directors were selected by an Internet users' vote.

Function of ICANN

ICANN coordinates the assignment of the following identifiers that must be globally unique for the Internet to function:

- Internet domain names
- IP address numbers
- Protocol parameter and port numbers.

In addition, ICANN coordinates the stable operation of the Internet's root server system. Future ICANN work is likely to address several key issues including institutional reform, the participation of Internet users in the policy-making process, the establishment of new top-level domains and amendments to ICANN's domain name dispute resolution process.

5. the Hague Conference on Private International Law

The Hague Conference is an intergovernmental organization that works to unify private international law rules. The first session of The Hague Conference

was held in 1893; after seven more sessions, a statute came into force in 1955 making the Conference a permanent organization.

The Conference, which has 59 Member States, holds plenary sessions every four years to discuss and adopt draft conventions and recommendations and make decisions on the working agenda of the Conference. Non-Member States invited to participate on an equal footing with Member States can vote at plenary sessions. The Conference is organized by a secretariat (the Permanent Bureau) which has its seat at The Hague and whose officials must be of different nationalities. The Bureau organizes the plenary sessions and maintains contacts with Member States, international organizations and users of the conventions.

Function of Hague Conference

The principal role of the Conference is to negotiate and draft multilateral treaties (conventions) in the different fields of private international law (e.g. international judicial and administrative cooperation; conflict of laws for contracts, torts, maintenance obligations, status and protection of children, relations between spouses, wills and estates or trusts; jurisdiction and enforcement of foreign judgments). Currently, its areas of concern include:

- conflict of jurisdictions;
- applicable law and international judicial and administrative cooperation regarding civil liability for environmental damage;
- problems of private international law raised by electronic interchange; and
- maintenance (support) obligations.

Role of Hague Conference in E-commerce

In 1999, the Conference held a round-table discussion (in conjunction with the University of Geneva) with experts in various fields on issues arising from e-commerce and Internet transactions. A series of recommendations were adopted in such areas as online contracts, business-to-business and business-to-consumer transactions and online dispute resolution. In June 2001 the Conference held its Nineteenth Session to work towards a new Convention on Jurisdiction and Foreign Judgments in Civil and Commercial Matters and to decide on its future work programme. Delegates based their discussions on both a Preliminary Draft

Convention drawn up in October 1999 and on the results of formal and informal meetings of experts on e-commerce and intellectual property.

6. WTO

The World Trade Organization (WTO) is the international organization that deals with the rules of trade between nations. Based in Switzerland, WTO was formed in 1995 as the successor of the General Agreement on Tariffs and Trade (GATT), which set up a multilateral trading system shortly after World War II. Today WTO has over 130 member nations, more than 75% of which are developing or least-developed countries.

A series of rounds of trade negotiations under GATT and WTO have led to agreements between governments on various aspects of trade, tariffs, telecommunications and financial services. These agreements help set the ground rules for international trade and commerce. Decisions are made by the entire membership, generally by consensus. WTO hosts a ministerial conference that generally meets every two years. Several other levels of councils and committees work on a wide variety of issues.

Function of WTO

The primary functions of WTO are to:

- administer WTO trade agreements;
- act as a forum for trade negotiations;
- handle trade disputes;
- monitor national trade policies;
- provide technical assistance and training for developing countries; and
- Work together with other international organizations.

At the 1998 ministerial meeting, WTO members agreed to study trade issues arising from global electronic commerce, focusing on three questions:

- How do existing WTO agreements impact e-commerce?
- Are there any weaknesses or omissions in the law which need to be remedied?
- Are there any new issues not now covered by WTO system on which members want to negotiate new disciplines?

Since then, issues related to e-commerce have been examined by WTO councils in the areas of services, goods, intellectual property and trade and development. A seminar on "Government Facilitation of E-commerce for Development" was held in June 2000, at which speakers from developing and developed countries, international organizations and the private sector addressed issues related to e-commerce and development. Each of WTO bodies working on e-commerce issues has produced progress reports for the General Council.

12.3 Role of National or Regional Entities in e-commerce

European Union (EU)

The European Commission has shaped e-commerce law throughout Europe and around the world since the mid-1990s. Essential directives include:

- Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data
- Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases
- Directive 97/7/EC of the European Parliament and of the Council of 20 May 1997 on the protection of consumers in respect of distance contracts
- Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market ("Directive on electronic commerce")
- Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society.

1. Council of Europe

Although it is frequently confused with the European Union, the Council of Europe is a distinct body that encompasses a far larger group of countries than the European Union. It includes 41 countries from Andorra to the United Kingdom. Several non-European countries, including the United States, Canada and Japan, enjoy observer status with the Council.

The Council of Europe is best known for having successfully completed negotiations on a global cybercrime treaty in 2001. The treaty covers a wide range of online criminal activity including fraud and computer hacking. It also addresses Internet service provider liability and copyright concerns. In late 2001, the Council announced plans to develop an additional protocol dealing with racism and xenophobia online.

2. APEC

The Asia-Pacific Economic Cooperation (APEC) was established in 1989 in response to the growing interdependence of Asia-Pacific economies. It began as an informal ministerial-level dialogue group with 12 members and has grown to include 21 member economies comprising some 2.5 billion people, a combined gross domestic product of over USD 18 trillion in 1999 and over 47 per cent of world trade. Its goal is to advance economic dynamism and sense of community within the Asia-Pacific region.

APEC operates by consensus. The APEC chair rotates annually among members and hosts an annual ministerial meeting of foreign and economic ministers. At each year's ministerial meeting, members define and fund the work programmes for APEC's various committees, subcommittees, working groups and forums. APEC also has a Business Advisory Council composed of up to three senior business people from each member economy to provide advice on APEC action plans and specific business/private sector priorities.

Function of APEC

APEC's goal is to achieve "free and open trade and investment in the Asia-Pacific by 2010 for developed member economies and 2020 for developing ones." In Osaka in 1995, APEC leaders established the three pillars of APEC activities: trade and investment liberalization, business facilitation and economic and technical cooperation. In 2000, APEC's objectives included:

- managing globalization through economic and technical cooperation and through participating in international forums;
- an Action Agenda for the New Economy, focusing on an e-Commerce Readiness Assessment, paperless trading and capacity building for both people and institutions;

- ensuring individuals from rural and urban communities alike have access to the Internet by 2010, including a pledge to triple the number of people with such access by 2005; and
- strengthening the multilateral trading system through a new WTO round.

Role of APEC's in e-commerce

APEC's E-Commerce Steering Group is currently working on a range of issues, including:

- a Digital Divide Blueprint for Action to address issues of the digital divide and reliable, affordable access to the information infrastructure;
- paperless trading;
- a review of the 2000 APEC Action Plan to Support the Use of Electronic Commerce by SMEs;
- development of APEC voluntary online consumer protection principles;
- development of policy regarding the creation of an environment conducive to e-learning; and
- reviewing and updating the 1998 APEC Blueprint for Action on Electronic Commerce.

1. United States

The United States has been a leader in developing e-commerce law policy since the Internet's inception. Agencies and organizations leading the way include:

- The Department of Commerce, which continues to play an oversight role over the Internet's infrastructure including the domain name system;
- The Federal Trade Commission, which has played the role of privacy and consumer protection enforcer;
- The Department of Justice, which administers United States competition law policy;
- The State Department, which leads the United States delegation at the Hague Conference negotiations;
- The Federal Communications Commission, which regulates communications infrastructure;

- The American Bar Association, which has developed policy documents on jurisdiction, privacy and e-commerce law; and
- The National Conference of Commissioners on Uniform State Law, which has drafted the Uniform Electronic Transactions Act, the United States version of the UNCITRAL Model Law on Electronic Commerce.

12.4 Role of NGOs in E-commerce

1. Global Business Dialogue on E-commerce (GBDe)

Established in January 1999, the Global Business Dialogue on E-commerce counts dozens of the world's largest companies as its members including Disney, Vivendi Universal, BCE, AOL Time Warner, NEC, NTT, Hitachi, Toshiba, Alcatel, Deutsche Telkom, Daimler Chrysler and Nokia.

GBDe focuses on providing governments with the business perspective on e-commerce law and policy development. The organization has identified eight areas of concern: consumer confidence, convergence, cyber security, digital bridges, e-government, intellectual property rights, taxation and trade.

2. Internet Law & Policy Forum (ILPF)

Founded in 1995, the Internet Law and Policy Forum is an international non-profit organization of major, Internet-oriented companies, including Verisign, Microsoft, BCE, Fujitsu and Deutsche Telekom, dedicated to promoting the global growth of electronic commerce and communications by contributing to solutions of the particular legal issues which arise from the cross-border nature of the Internet and electronic networks. ILPF provides information, calling upon the legal, business and technical expertise of its member companies and other companies, from governments and intergovernmental organizations and from the practice of law around the world.

ILPF addresses issues of concern through working groups consisting of representatives from member organizations. It currently has four such working groups:

- Working Group on Jurisdiction
- Working Group on Electronic Authentication (a combination of the original Working Groups on Certificate Authorities and on Digital Signatures)

- Working Group on Content Regulation and Intermediary Liability
- Working Group on Self-Regulation.

3. Consumers International

Founded in 1960, Consumers International supports links and represents consumer groups and agencies all over the world. It has a membership of more than 260 organizations in almost 120 countries. It strives to promote a fairer society through defending the rights of all consumers, including the poor, marginalized and disadvantaged.

Consumers International identified e-commerce as an issue of concern in 1998, calling on governments to establish global protections for consumers who are engaged in e-commerce. Since that time, the organization has played a leading role in crafting e-commerce consumer protection policy and in working to establish effective and fair dispute resolution processes.

4. Electronic Privacy Information Centre (EPIC)

EPIC is a public interest research centre in Washington, D.C., established in 1994 to focus public attention on emerging civil liberties issues and to protect privacy, the First Amendment of the United States Constitution and constitutional values.

EPIC acts predominantly on cases of interest to the United States. It has appeared on some of the Internet and e-commerce's leading-edge cases including the Scarfo case on key stroke monitoring, the Microsoft antitrust case and the case challenging the constitutionality of the Children's Online Protection Act. EPIC has also played an important role in global awareness campaigns involving privacy issues.

5. International Chamber of Commerce (ICC)

The International Chamber of Commerce is a world business organization that speaks on behalf of enterprises from all sectors in every part of the world. ICC promotes an open international trade and investment system and the market economy. It often works with its member companies to develop global business codes of conduct. It also provides essential services, foremost among them the ICC International Court of Arbitration, a leading arbitral institution. Within a year of the creation of the United Nations, ICC was granted consultative status at the highest level with the United Nations and its specialized agencies.

ICC is involved in e-commerce law issues on several fronts. Given its leading role in dispute resolution, ICC has shown a keen interest in developing dispute resolution for both B2C and B2B e-commerce. It has adapted for e-commerce its leading international trade rules, such as the Incoterms and the Uniform Rules for Documentary Credits. The organization has also become involved in jurisdictional negotiations, privacy and electronic contracting.

12.5 Role of Indian Regulatory Authorities in E-commerce

1. Department of Electronics and Information Technology

The functions of the Department of Electronics and Information Technology, Ministry of Communications & Information Technology, Government of India are as follows–

- Policy matters relating to Information Technology, Electronics and Internet.
- Initiatives for development of Hardware / Software industry including knowledge based enterprises, measures for promoting Information Technology exports and competitiveness of the industry.
- Promotion of Information Technology and Information Technology enabled services and Internet.
- Assistance to other departments in the promotion of E-Governance, Infrastructure, E-Medicine, E-Commerce, etc.
- Promotion of Information Technology education and Information Technology-based education.
- Matters relating to Cyber Laws, administration of the Information Technology Act, 2000 and other Information Technology related laws.
- Matters relating to promotion and manufacturing of Semiconductor Devices in the country
- Interaction in Information Technology related matters with International agencies and bodies.
- Initiative on bridging the Digital Divide, Matters relating to Media Lab Asia
- Promotion of Standardization, Testing and Quality in Information Technology and standardization of procedure for Information Technology application and Tasks

- Electronics Export and Computer Software Promotion Council (ESC)
- National Informatics Centre (NIC)
- All matters relating to personnel under the control of the Department.

2. Controller of Certifying Authorities (CCA)

The Information Technology Act provides for the Controller of Certifying Authorities (CCA) to license and regulate the working of Certifying Authorities. The Certifying Authorities (CAs) issue digital signature certificates for electronic authentication of users. The CCA certifies the public keys of CAs using its own private key, which enables users in the cyberspace to verify that a given certificate is issued by a licensed CA. For this purpose it operates, the Root Certifying Authority of India (RCAI).

3. Cyber Appellate Tribunal

Cyber Appellate Tribunal has been established under the Information Technology Act under the aegis of Controller of Certifying Authorities (CCA). A Cyber Appellate Tribunal consists of one Presiding Officer who is qualified to be a Judge of a High Court or is or has been a member of the Indian Legal Service and is holding or has held a post in Grade I of that service for at least three years supported by other official under him/her. The Cyber Appellate Tribunal has, for the purposes of discharging its functions under the Information Technology Act, the same powers as are vested in a civil court under the Code of Civil Procedure, 1908. However, is not bound by the procedure laid down by the Code of Civil Procedure, 1908 but is guided by the principles of natural justice and, subject to the other provisions of this Act and of any rules. The Cyber Appellate Tribunal has powers to regulate its own procedure including the place at which it has its sittings.

Every proceeding before the Cyber Appellate Tribunal shall be deemed to be a judicial proceeding within the meaning of sections 193 and 228, and for the purposes of section 196 of the Indian Penal Code and the Cyber Appellate Tribunal shall be deemed to be a civil court for the purposes of section 195 and Chapter XXVI of the Code of Criminal Procedure, 1973.

The composition of the Cyber Appellate Tribunal is provided for under Section 49 of the Information Technology Act, 2000. Initially the Tribunal consisted of only one person who was referred to as the Presiding Officer who was to be appointed by way of notification by the Central Government. Thereafter the

Act was amended in the year 2008 by which section 49 which provides for the composition of the Cyber Appellate Tribunal has been changed. As per the amended section the Tribunal shall consist of a Chairperson and such number of other Members as the Central Government may by notification in the Official Gazette appoint. The selection of the Chairperson and Members of the Tribunal is made by the Central Government in consultation with the Chief Justice of India. The Presiding Officer of the Tribunal is now known as the Chairperson.

4. Indian Computer Emergency Response Team (ICERT)

The mission of ICERT is to enhance the security of India's Communications and Information Infrastructure through proactive action and effective collaboration. Its constituency is the Indian Cyber-community. The purpose of the ICERT is, to become the nation's most trusted referral agency of the Indian Community for responding to computer security incidents as and when they occur; the ICERT will also assist members of the Indian Community in implementing proactive measures to reduce the risks of computer security incidents. It provides technical advice to system administrators and users to respond to computer security incidents. It also identifies trends in intruder activity, works with other similar institutions and organisations to resolve major security issues and disseminates information to the Indian cyber community.

12.6 Summary

E-commerce law frameworks at the national level vary by country. In some countries, such as Japan, India, Malaysia, South Africa and Columbia, most of the e-commerce law and policy initiatives come from the national government. The United States and Canada use a dual approach whereby both the federal and state/provincial governments play a role, while in the European Union; directives applicable in all Member States are often the most important source of legal guidance. NGOs play a critical role in the development of e-commerce law. Governments also have an important role to play in supporting the use and development of e-commerce through their active participation in the international trading system. In this regard, many areas of the WTO’s work are relevant to e-commerce.

Taxation of e-commerce has become a major concern for international agencies and tax authorities worldwide. India has signed tax treaties with various

countries. These are mainly based on OECD. These treaties are making it mandatory to reduce the loss of income due to double taxation and also to give relief to Indian Assesses from double taxation.

12.7 Self-Assessment Test

1. Discuss the role of OECD in development of e-commerce.
2. Explain the Role of Indian Regulatory Authorities in E-commerce.
3. State the primary functions of World Trade Organization.
4. Discuss the functions and role of 'World Intellectual Property Organization' in E-commerce.
5. What are the objects of Asia-Pacific Economic Cooperation (APEC)?

12.8 Suggested Readings

- Nisha Chanana, Sangeeta Goele "Future of E-commerce in India"
- C. M. Abhilash "E-Commerce Law in Developing Countries: An Indian Perspective"
- Vakul Sharma, "Information Technology: Law and Practice"
- Chetan Karnatak, "Cyberspace: Jurisdictional Issues of E-commerce and Consumer Protection"
- Teresa Rodríguez de las Heras Ballell, "Applicable Law and Jurisdiction in Electronic Contracts"

Unit-13

Credit card and Internet Objectives:

Objectives:

After going through this Unit you should be able to understand:

- Development and future of credit card in India
- Various types of card
- Frauds related to cards and RBI Measures for fraud prevention

Structure:

13.1Introduction
13.2 History and Development of Card
13.3 Payment Using Credit Cards
13.4 Classification of Credit Card
13.5 Credit Cards Fraud
13.6 Future of Credit cards in India
13.7 Summary
13.8 Self-Assessment Test
13.9 Suggested Readings

13.1 Introduction

Payment is an important component in e-commerce. In day-today commercial dealings there are many modes of payment, each with its own advantages and disadvantages. The most common payment, especially for low value purchases, is by cash. Credit cards are preferred by customers for higher value purchases. If a customer is a trusted party, merchants normally accept cheques. Payment for services such as telephone bills, electricity bills, etc. and settlement of bills between businesses is normally by cheque. Large electronic cash transactions are discouraged by most governments. A Credit card is a card or mechanism which enables cardholders to purchase goods, travel and dine in a hotel without making immediate payments. Credit card is a card establishing the

privilege of the person to whom it is issued to charge bills. The card issued by a financial company giving the holder an option to borrow funds, usually at point of sale. Credit cards charge interest and are primarily used for short-term financing. Interest usually begins one month after a purchase is made and borrowing limits are pre-set according to the individual's credit rating. Credit cards have higher interest rates than most consumer loans or lines of credit. Most retail firms accept credit cards. Credit cards allow consumers to make purchases without paying cash immediately or establishing credit with individual stores. They eliminate the need to check credit ratings and to collect cash from individual customers. The issuing institution establishes the card's terms, including the interest rate, annual fees, penalties, the grace period, and other features. Credit card debt is typically an unsecured debt.

13.2 History and Development of Card

As far back as the late 1800s, consumers and merchants exchanged goods through the concept of credit, using credit coins and charge plates as currency. It was not until about half a century ago that plastic payments as we know them today became a way of life. The most common pre-plastic credit instruments were charge plates, celluloid "coins" and charge coins**.**

The concept of using a card for purchases was described in 1887 by Edward Bellamy in his Utopian novel *Looking Backward***.** Bellamy used the term credit card eleven times in his novel. In the early 1900s, oil companies and department stores issued their own proprietary cards. Such cards were accepted only at the business that issued the card and in limited locations. While modern credit cards are mainly used for convenience, these predecessor cards were developed as a means of creating customer loyalty and improving customer service. The modern credit card was the successor of a variety of merchant credit schemes. It was first used in the 1920 in the United States, specifically to sell fuel to accepting each other's cards. Western Union had begun issuing charge cards to its frequent customers in 1914. Some charge cards were printed on paper card stock, but were easily counterfeited.

The Charga-Plate was an early predecessor to the credit card and used during the 1930s and late 1940s. Charga-Plate was a trademark of Farrington

Manufacturing Co. Charga-Plates was issued by large-scale merchants to their regular customers, much like department store credit cards of to-day. The first bank card, named "Charge-It," was introduced in 1946 by John Baggins, a banker in Brooklyn. When a customer used it for a purchase, the bill was forwarded to Baggins' bank. The bank reimbursed the merchant and obtained payment from the customer. Purchases could only be made locally, and “Charge-It” cardholders had to have an account at Baggins' bank. In 1951, the first bank credit card appeared in New York's Franklin National Bank for loan customers. It also could be used only by the bank account holders.

The concept of paying different merchants using the same card was invented in 1950 by Ralph Schneider and Frank X. McNamara, founders of Diners Club, to consolidate multiple cards. The Diners Club, which was created partially through a merger with Dine and Sign, produced the first "general purpose" charge card, and required the entire bill to be paid with each statement. That was followed by Carte Blanche and in 1958 by American Express which created a worldwide credit card network. The Bank of America created the Bank America in 1958, a product which, with its overseas affiliates, eventually evolved into the Visa system. MasterCard came to being in 1966 when a group of credit-issuing banks established Master Charge. It received a significant boost when Citibank merged its proprietary ‘Everything Card’, launched in 1967, into Master Charge in 1969. The fractured nature of the U.S. banking system meant that credit cards became an effective way for those who were traveling around the country to move their credit to places where they could not directly use their banking facilities. In 1966, Barclaycard in the UK launched the first credit card outside the U.S. There are now countless variations on the basic concept of revolving credit for individuals (as issued by banks and honored by a network of financial institutions), including organization-branded credit cards, corporate-user credit cards, store cards and so on**.**

13.3 Payment Using Credit Cards

There are four parties involved in these transactions. They are:

1. the customer who owns a credit card,

2. Merchants who accept credit cards (typically a merchant would accept credit cards of several companies such as VISA, MASTERCARD, etc.),
3. a bank which issues credit cards to customers, guarantees payments to merchants and collects payments from its customers and,
4. An acquirer which is a financial institution that establishes an account with a merchant and validates card information presented by a merchant and authorizes sale based on customer's credit status.

The acquirer accepts cards of several bankcard associations, takes the responsibility of electronically transferring payment to merchants' account and is in turn reimbursed by the issuing bank. Credit card transactions are carried out as follows:

1. A customer presents a credit card to a merchant after purchasing goods.
2. The merchant reads information contained in the credit card's magnetic strip using a terminal and enters the transaction amount.
3. The information goes to the acquirer via a private telephone line. The acquirer's computer checks the validity of the card, credit available to the customer and sends an OK authorizing transaction, provided card and credit are OK.
4. The merchant takes the signature of the customer on the authorization slip, compares the signature with that in the card and delivers the goods.
5. The acquirer pays the merchant and collects the money from the appropriate issuing bank.
6. The bank sends a monthly statement to the customer and collects the outstanding amount.

The card transaction is validated using the physical card and customer's signature on the card. In ecommerce there is no physical contact between the merchant and the customer making it impossible to verify a physical signature. Also it is necessary for the merchant to verify the genuineness of the customer and for the customer to be assured that he is not dealing with a fake merchant. Thus a customer would be reluctant to reveal his credit card number and details using the internet as the merchant may be a fake or the number may be stolen by eavesdroppers on the internet. Further, if the merchant is careless, a hacker may access the merchant's database and steal credit card numbers. There have been cases reported in the press of credit card numbers being stolen by hackers as well as by disgruntled employees of merchants. Thus a protocol is required in which the

credit card number is not revealed to a merchant but only to the acquirer who authorizes sale based on the credit card validity and available credit. In addition to this, the acquirer and the bank need not know what was bought by a customer (to protect the privacy of customers). They need to know only how much is the bill amount.

Secure Electronic Transaction (SET) protocol.

A protocol called Secure Electronic Transaction (SET) protocol has been standardized for credit card payments by major credit card companies such as VISA and MASTERCARD. To use the SET protocol for credit card transactions it is assumed that:

1. A public key encryption system is used by both customers and merchants. Thus each of the parties involved in e-commerce transactions have a pair of keys - a private and a public key.
2. All parties have their public keys certified by a certification authority and these certificates accompany requests for service sent by them. This is to assure both customers and merchants that they are dealing with genuine parties.
3. A standard hashing algorithm is used to create message digests for digitally signing purchase order.

The main features of this protocol are:

a) It ensures that a customer's credit card number is not revealed to a merchant. It is revealed only to the acquirer who authorizes payment.

b) Purchase invoice details are not revealed to the acquirer. Only the credit card number and total amount is revealed to the acquirer.

c) Purchase invoice coupled with the credit card number is digitally signed by the customer so that an arbitrator can settle disputes, if any, on purchase invoice and cost.

Dual Signature Scheme

SET protocol depends on an innovation called dual signature whose main purpose is to give to a merchant the purchase order and amount only (without revealing the credit card number) and give the credit card number and the amount to be paid (without revealing the purchase order details) to the acquirer. It will also ensure that the payment is for the actual purchase made. The customer cannot repudiate his purchase order as it has been signed by him and deposited with the

bank. The merchant also cannot substitute a customer's purchase order with some other purchase order as the signature contains a unique digest of the customer's purchase order deposited with the bank.

The procedure can be summarized in following steps:-

1. Customer fills purchase order, amount payable and credit card number in his PC. Software in the PC strips it into two parts; purchase order with amount (POA) and credit card number with amount (CCA). POA is encrypted using merchant's public key and CCA with the bank's public key. Both are sent to the merchant along with CCD and dual signature CDS). Merchant verifies signature and proceeds further if signature is OK.
2. Merchant forwards encrypted CCA, POD and DS to acquirer who forwards it to the customer's bank.
3. The bank decrypts CCA with its private key, checks the validity of the credit card and available balance in the credit card account. If it is OK and the customer's digital signature is OK, it authorises the acquirer to proceed with the transaction.
4. The acquirer in turn OKs transaction to the merchant and credits his account.
5. The merchant accepts the customer's pqrchase order and informs him about delivery details.
6. At the end of the month the bank issuing the credit card sends a consolidated bill to the customer.

All of the operations are carried out by software stored in the respective computers and affected by clicks of a mouse button.

Drivers of growth in card payment market

Several factors have combined to fuel the astonishing growth in the use of credit and debit cards in India. Apart from the convenience offered by cards, these factors include the following:

1. Rising consumerism
2. Improved payment infrastructure
3. Competition and lower costs
4. Co-branding

13.4 Classification of Credit Card

Catering to different types of consumer needs, credit card companies issue several types of credit cards. Each type has its own benefits. They can be classified as follows:

A. Based on Franchise / Tie-up

i. **Proprietary Card:** Cards that are issued by the banks themselves without any tie-up are called proprietary cards. A bank issues such cards under its own brand. Examples include SBI Card, CanCard of Canara Bank, Citicard.

ii. **Master Card:** This is a type of credit card issued under the umbrella of MasterCard International. The issuing bank has to obtain a franchise from the MasterCard Corporation of the USA. The franchised cards will be honoured in the MasterCard network.

iii. **VISA Card:** This type of credit card can be issued by any bank having tie-up with VISA International Corporation, USA. The banks that issue such cards are said to have a franchise of VISA International. The advantage of a VISA franchise is that one can avail the facility of the VISA network for transactions.

iv. **Domestic tie-up Card:** These cards are issued by a bank having a tie-up with domestic card brands such as CanCard and Indcard are called 'Domestic cards'.

B. Based on Geographical Validity

i. Domestic Card: Cards that are valid only in India and Nepal are called 'domestic cards'. They are issued by most of the banks in India all transactions will be in rupees.

ii. International and Global Card: Credit cards with international validity are called 'international cards'. They are issued to people who travel abroad frequently. They are honoured in every part of the world except India and Nepal. The cardholder can make purchases in foreign currencies subject to RBI sanction and FERA rules and regulations.

C. Based on the Issuer Category

i. Individual Card: These are the non-corporate credit cards that are issued to individuals. Generally, all brands of credit cards are issued to individuals.

ii. Corporate Card: They are credit cards issued to corporate and business firms. The executives and top officials of the firms use them. They bear the names of the firms, and the bills are paid by the firms.

D. Based on Mode of Credit Recovery

i. **R**

evolving Card: This type of credit card is based on the revolving credit principle. A credit limit is fixed on the amount of money one can spend on the card for a particular period. The cardholder has to pay a minimum percentage of the outstanding credit which may vary from 5 to 10 percent at the end of a particular period. Interest varying from 30 to 36 percent per annum is charged on the outstanding amount.

ii. **C**

harge Card: A charge card is not a credit instrument, it is a convenient mode of making payment. This facility gives a consolidated for a specific periods and bills are payable in full on presentation. There is neither interest liability nor no per-set spending limits.

E. Based on Status of Card

i. **S**

tandard Card: Credit cards that are regularly issued by all card-issuing banks are called 'standard cards'. With these cards, it is possible for a cardholder to make purchases without having to pay cash immediately. They however, offer only limited privileges to cardholders. Some banks issue standard cards under the Brand name "Classic" cards, which are generally issued to salaried people.

ii. **B**

usiness Card: Business cards also known as 'Executive cards', are issued to small partnership firms, solicitors, firms of chartered accountants, tax consultants and others, for use by executives on their business trips. They enjoy higher credit limits and more privileges than the standard cards.

iii. **G**

old Card: The gold card offers high value credit for elite. It offers many additional benefits and facilities such as higher credit limits, more cash advance limits that are not available with the standard or the executive cards.

F. Innovative Card

In addition, credit cards which have evolved into a variety of innovative cards over the years are also issued by banks.

i. A

TM Card: ATM cards allow customers to access their accounts at any time-24 hours a day, every day of the year, through Automated Teller Machines. Customers can withdraw cash, transfer funds, find out their account balance and perform other banking and financial transactions with the help of ATMs.

ii. D

ebit Card: A debit card, like an ATM card, directly accesses a customer's account. It is a hybrid of ATM and credit card. The card directly debits a designated savings bank account. Whereas in the case of credit cards, a grace credit period of 20 to 50 days for making the payment is available, no such credit period is allowed under debit cards. These cards can be used either at merchant locations who have this facility to buy goods and services or at ATMs. Presently, ATM-Cum Debit cards issued by Indian banks are in use.

iii. P

repaid Card: Prepaid cards are also known as 'Stored Value Cards'. These cards are with stored value paid in advance by the holder. The card issuer and the service provider are identical. They are also called Limited Purpose Prepaid Cards which can be used for a limited number of well –defined purposes. Its use is often restricted to a number of identified points of sales within a specified location

iv. P

rivate Label Card: These cards are uniquely tied to the retailer issuing the card and can be used only in that retailer's stores. A bank, on the basis of a contractual agreement with the retailer extends credit under this type of card.

v. A

ffinity Group Card: These are credit cards designed for a collection of individuals with some form of common interest or relationship, such as professional, alumni, retired persons' organizations, sports teams, schools, or service organizations. This credit card carries the logo of the affiliated organization on the card design and brings special benefits and discounts on products from that company. In case the affiliated company is a charity or non-profit organization, a part of the credit card expenses go into the affiliate organization's account. For example: The Help Age India Credit Card issued by ICICI bank.

vi. S

mart Card: A smart card is a credit card sized plastic card with an embedded computer chip. The chip allows the card to carry a much greater amount of information than a magnetic strip card. The telecom industry, was perhaps the pioneer in smart cards, the most prominent being Subscriber Identity Module (SIM) cards in the GMS digital cellular network. Using special terminals designated to interact with the embedded chip, the card can perform special functions. This is essentially a prepaid card.

vii. C

hip Card: A chip card is a plastic card with an embedded integrated circuit or as microchip as opposed to magnetic strips on a conventional card. The chip can be used on existing debit and credit cards as well as on emerging products like stored value cards. Inserting the card in a pin-pad effects the transaction, and the value on it reduces accordingly. It is re-loadable and disposable. The idea is to do away with the trouble of carrying cash. The chip card also scores over the magnetic card, in that it can retain 50 to 60 of the latest transactions, which can be produced on demand. It is also considered more durable and secure since the cardholder alone can access it through a Personal Identification Number (PIN).

viii. C

o-branded card: The Times Card, a co-branded credit card, is the first of its kind, from a publishing house in the Asian subcontinent. This is a cobranded credit card of Times of India Group and Citibank MasterCard. The co-branding concept caught the credit card industry the world over during the last five years.

13.5 Credit Cards Fraud

Credit card fraud is a wide-ranging term for theft or fraud committed using a credit card or any similar payment mechanism as a fraudulent source of funds in a transaction. The purpose may be to obtain goods without paying, or to obtain unauthorized funds from an account. Credit card fraud is also an adjunct to identity theft. The card holder may not discover fraudulent use until receiving a billing statement, which may be delivered infrequently.

Types of Card Fraud

1. Cardholders' fraud

The most common type of fraud against credit cards is cardholders falsifying applications to get higher credit limits than they can afford to pay, or to get multiple cards that they cannot afford to pay off. Those who intend to defraud generally use the multiple-card approach. They give false names and financial data on several of applications. Often, the address of a vacant house that the criminal has access to is given, making it difficult to track the criminal's real identity.

2. Third party frauds

The simplest way for a third party to commit fraud is for them to get their hands on a legitimate card. There is a large black market for credit cards obtained from hold-ups, break-ins and muggings. Perhaps one of the cruelest methods of getting a card is a "Good Samaritan" scams. In such a scam, credit cards are stolen by pick-pockets, purse-snatchers. The same day, someone looks up cardholders' number in the phone book and calls up.

3. Merchants' fraud

There are many urban rumors of merchants imprinting a card multiple times while the cardholder is not looking, and then running through a bunch of charges after the cardholder leaves. This is certainly one technique a dishonest cashier can use. The cashier can then take home a bunch of merchandise charged to his account. Although some people are afraid of this happening in a restaurant, where a waiter takes our card away for a while, it's actually less likely there, since there is not anything the waiter can charge against our card and takes home.

4. Acquirer and issuer fraud

The place to make really big bucks in fraud is at the acquirer or issuer. It is also fairly easy to control things here with audit procedures and dual control. People working in the back offices, processing credit slips, bills have a big opportunity to "lose" things, introduce false things, artificially delay things, and temporarily divert things. Most of the control is standard banking staff, and has been proven effective for decades, so this isn't a big problem. A bigger potential problem to the consumer is the possibility of an employee at the issuer or acquirer selling PANs to crooks.

5. Stolen card fraud

When a credit card is lost or stolen, it remains usable until the holder notifies the bank that the card is lost most banks have toll-free telephone numbers with 24-hour support to encourage prompt reporting. Still, it is possible for a thief to make unauthorized purchases on that card up until the card is cancelled. In the absence of other security measures, a thief could potentially purchase thousands of dollars or rupees in merchandise or services before the card holder or the bank realize that the card is in the wrong hands.

6. Compromised accounts

Card account information is stored in a number of formats. Account numbers are often embossed or imprinted on the card, and a magnetic stripe on the back contains the data in machine readable format. Fields can vary, but the most common include Name of card holder, Account number, Expiration date, Verification/CVV code. Many Websites have been compromised in the past and theft of credit card data is a major concern for banks. Data obtained in a theft, like addresses or phone numbers, can be highly useful to a thief as additional card holder verification.

7. Mail/Internet order fraud

The mail and the Internet are major routes for fraud against merchants who sell and ship products as well as Internet merchants who provide online services. The industry term for catalog order and similar transactions is “Card Not Present” (CNP), meaning that the card is not physically available for the merchant to inspect. The merchant must rely on the holder to present the information on the card by indirect means, whether by mail, telephone or over the Internet when the cardholder is not present at the point of sale.

8. Internet fraud

The term "Internet fraud" generally refers to any type of fraud scheme that uses one or more online services - such as chat rooms, e-mail, message boards, or Web sites - to present fraudulent solicitations to prospective victims, to conduct fraudulent transactions, or to transmit the proceeds of fraud to financial institutions or to others connected with the scheme.

RBI Measures for Fraud Prevention

RBI has recommended the following measures to be taken by every credit card issuers.

a. Mandatory SMS facility for Online Transactions over Rs 5,000. However, Most of the banks have started to send the SMS for every Online Transaction.
b. Separate Password protection for all Online Transaction. CVV is not enough; the hacker will need a password as well.
c. Secured Transaction mechanism for customers doing business on IVR - Interactive Voice Response Systems.
d. RBI measure in internet security.

All these measures have to be fully implemented by each and every credit card company operational in India under the guidelines of RBI

13.6 Future of Credit cards in India

The average monthly credit card spend has gone up 28.5% from Rs 12,035 crore a month in Financial year 2014 to Rs 15,470 crore a month (April-October 2014). At present, there are two crore credit card users in India.

With high and industry-favourable figures, there is no doubt that the rise in number of credit card providers and users have come of age. With these positively-influencing trends expected to continue in the near and far-future, the writing is on the wall. The credit card industry is likely to soar more than any industry segment. To add to that, easy and continuous payments' structures with each passing day and with every Bank poised to expand its network, the Indian credit card user community is the biggest beneficiary. The intensifying competition prevalent in the present day Indian credit card market has further fuelled the usage of credit cards in the country like never-before. In an aim to overpower the peers and to sustain and prosper themselves, the Banks and financial institutions have started cutting down the interest rates and offering lucrative deals. Payment card systems such as MasterCard and Visa involve four main parties, i.e.,

- t

he cardholder;

- t

he institution that provides the card to the cardholder – the issuer;

- t

he merchant that provides the goods or services to the cardholder; and

- t

he institution that provides services to the merchant – the acquirer

Thus, the system consists of a customer who holds a credit / debit card from his issuing bank (issuer), a merchant who has been given the facility of accepting credit cards by his acquiring bank (acquirer) and the payment network MasterCard / Visa, etc. In this system, first a merchant who decides to accept credit or debit cards in exchange for goods or services establishes a merchant account by forming a relationship with an acquiring bank. This relationship enables the merchant to receive sale proceeds from credit / debit card purchases through credits in his account. However, the acquirer, while paying such credits to the merchant, applies a Merchant Discount Rate (MDR), which is a proportion of the sale proceed that is paid by the merchant to the acquirer in consideration for card acceptance services. Thus, the MDR is a percentage of sales that a merchant pays to the acquiring bank to process credit / debit card transactions. In India on MasterCard and Visa card transactions this rate generally varies from 1% to 2%. The MDR is generally greater for premium cards than for standard cards.

Thus, considering the average MDR to be 1.5%, the revenue generated in the card business, through MDR only, is of the order of 1,340 crore. A component of MDR on every card transaction, called interchange, flows from the merchant acquiring bank to the card issuing bank. The settlement and credit transactions between the issuer and the acquirer are done using the network of MasterCard / Visa, who also gets a share of the fee in exchange.

In practical terms, when a cardholder uses his or her card to make a purchase from a merchant, the acquiring institution makes a payment to the merchant equal to the retail price less the MDR. The acquiring institution receives a payment from the card-issuing institution equal to the retail price less an interchange fee. The average interchange fee on MasterCard and Visa card transactions is approximately two-thirds of MDR. The interchange fee being a cost from the perspective of the acquiring institution affects the level of MDR. The interchange fee, however, is a source of revenue from the perspective of issuing institutions. Issuers incur a variety of costs like costs for, marketing to new cardholders, providing service to existing cardholders (including call centre services), extending credit, bearing risk, absorbing default, preventing fraud, etc.

Revenues from interchange fees help issuers recover costs and help issuers hold down cardholder fees and maintain card benefits such as interest-free periods and reward programs

It may be noted that in India a gas station merchant does not charge extra, but it is the issuing bank who may charge some extra money from the cardholder for using card at gas station. Also, for purchases of train tickets over counters / net it is the bank who charges an additional amount and not the railways. Currently, such charges are 2.5% of the actual transaction amount (the exception being for train tickets bought over the net for which a rate of 1.8% applies). This raises a vital question on the reasonability of bank's charging 2.5% from cardholders for purchases of petrol / diesel / CNG at gas stations or charging 2.5% from cardholders for train ticket purchases at railway ticket counters. Based on general interaction with banks, it transpires that over the years, the average MDR has been decreasing. However, MasterCard / Visa found it justified to retain the 2.5% charge at gas stations and on train ticket purchases. Furthermore, one needs to take into consideration that non-payment of any merchant service charges by gas station owners or railways amounts to acceptance by MasterCard / Visa that there is no value addition in terms of convenience gained by these merchants for accepting card payment as a mode of receiving sale proceeds. This may be in contradiction to the general view floated by Master Card / Visa that MDR includes a charge that merchants pay for the convenience gained in non-handling of cash.

13.7 Summary

Electronic Payment via credit card has brought profound changes in recent times. Payment by credit card has revolutionized the business processing by reducing paper work, transaction costs, labour cost. Being user friendly and less time consuming than manual processing, helps business organization to expand its market reach / expansion. It is gaining a rapid growth and it has a significant impact on market of all the countries. Credit Card has become a de facto standard for online payments. This increase use of credit card has raised fraudulent practices across the world. There are no secure well defined ways to deal with credit card frauds in developing countries. Credit card fraud is a wide-ranging term for theft or fraud committed using a credit card or any similar payment mechanism as a fraudulent source of funds in a transaction. The Reserve Bank of India has

recommended measures to prevent Credit Card Frauds or at least minimize the same.

13.8 Self-Assessment Test

1. What do you understand by credit card? Discuss its importance.
2. What is Secure Electronic Transaction (SET) protocol? What are its main features?
3. Explain the various types of Credit Card.
4. What is Credit Cards Fraud? In what ways it can be occurred?
5. Discuss the Future of Credit cards in India.

13.9 Suggested Readings

- V Rajaraman, "Electronic Commerce, Payment Schemes"
- Sonnet Debbarma and Gypsy Nandi, "Promoting E-Commerce in India: Main Issues and Challenges"
- Dr. Anukrati Sharma, "A Study on E-Commerce and Online Shopping: Issues and Influences,"
- Dr. Kh. Dhiren Meetei and O. Deepakkumar Singh, "E Commerce in Rural India"
- Ankita Pahuja, "E-commerce in India and the potential competition issues with special reference to credit cards market in India"

Unit-14
E-Banking and E-Banking Frauds

Objectives:

After going through this Unit you should be able to understand:

- Meaning and types of e-banking
- Development of e-banking in India
- Function and types of e-banking
- Various types of fraud relating to e-banking

Structure:

14.1 Introduction
14.2 E-banking
14.3 Reasons for Growth in Internet Banking
14.4 Types of e-Banking
14.5 Function of e-Banking
14.6 Benefits of E-Banking
14.7 Risks Associated with Internet Banking
14.8 E-banking Fraud
14.9 Summary
14.10Slf-Assessment Test
14.11Suggested Readings

14.1 Introduction

Information Technology has become a necessary tool in today's organizations. Banks today operate in a highly globalized, liberalized, privatized and a competitive environment. In order to survive in this environment banks have to use Information Technology. Information Technology has introduced new business paradigm. It is increasingly playing a significant role in improving the services in the banking industry. Indian banking industry has witnessed a

tremendous developments due to sweeping changes that are taking place in the information technology. E-banking has emerged from such an innovative development. Internet banking means any user with a personal computer and a browser can get connected to his bank's website to perform any of the virtual banking functions. In internet banking system the bank has a centralized database that is web-enabled. All the services that the bank has permitted on the internet are displayed in menu. Once the branch offices of bank are interconnected through terrestrial or satellite links, there would be no physical identity for any branch. It would be a borderless entity permitting anytime, anywhere and anyhow banking. The RBI, Government and the banks are developing controlling mechanisms for the development of Banking services and customer trust.

14.2 E-banking

E-banking is the term that signifies and encompasses the entire sphere of technology initiatives that have taken place in the banking industry. E-banking is a generic term making use of electronic channels through telephone, mobile phones, internet etc. for delivery of banking services and products. Internet banking (or E-banking) means any user with a personal computer and a browser can get connected to his bank's website to perform any of the virtual banking functions. In internet banking system the bank has a centralized database that is web-enabled. All the services that the bank has permitted on the internet are displayed in menu. Once the branch offices of bank are interconnected through terrestrial or satellite links, there would be no physical identity for any branch. It would be a borderless entity permitting anytime, anywhere and anyhow banking.

The network which connects the various locations and gives connectivity to the central office within the organization is called intranet. These networks are limited to organizations for which they are set up. E-banking provides enormous benefits to consumers in terms of ease and cost of transactions, either through Internet, telephone or other electronic delivery. Electronic finance (E-finance) has become one of the most essential technological changes in the financial industry. E-finance as the provision of financial services and markets using electronic communication and computation. In practice, e-finance includes e-payment, e-trading, and e-banking.

14.3 Reasons for Growth in Internet Banking

There are numerous factors like competitive cost, customer service, and demographic considerations are motivating banks to evaluate their technology and assess their electronic commerce and Internet banking strategies. Many researchers expect rapid growth in customers using online banking products and services. The challenge for national banks is to make sure the savings from Internet banking technology more than offset the costs and risks associated with conducting business in cyberspace. The adoption of Internet banking has been increased dramatically during the last few years due to the following reasons.

Competition

Studies show that competitive pressure is the chief driving force behind increasing use of Internet banking technology, ranking ahead of cost reduction and revenue enhancement, in second and third place respectively. Banks see Internet banking as a way to keep existing customers and attract new ones to the bank.

Cost Efficiencies

National banks can deliver banking services on the Internet at transaction costs far lower than traditional branches. The actual costs to execute a transaction will vary depending on the delivery channel used. These costs are expected to continue to decline. National banks have significant reasons to develop the technologies that will help them deliver banking products and services by the most cost-effective channels.. However, national banks should use care in making product decisions. Management should include in their decision making the development and ongoing costs associated with a new product or service, including the technology, marketing, maintenance, and customer support functions. This will help management exercise due diligence, make more informed decisions, and measure the success of their business venture.

Geographical Reach

Internet banking allows expanded customer contact through increased geographical reach and lower cost delivery channels. In fact some banks are doing business exclusively via the Internet — they do not have traditional banking offices and only reach their customers online. Other financial institutions are using

the Internet as an alternative delivery channel to reach existing customers and attract new customers.

Branding

Relationship building is a strategic priority for many national banks. Internet banking technology and products can provide a means for national banks to develop and maintain an ongoing relationship with their customers by offering easy access to a broad array of products and services. By capitalizing on brand identification and by providing a broad array of financial services, banks hope to build customer loyalty, cross-sell, and enhance repeat business.

Customer Demographics

Internet banking allows national banks to offer a wide array of options to their banking customers. Some customers will rely on traditional branches to conduct their banking business. For many, this is the most comfortable way for them to transact their banking business. Those customers place a premium on person-to-person contact. Other customers are early adopters of new technologies that arrive in the marketplace. These customers were the first to obtain PCs and the first to employ them in conducting their banking business. The demographics of banking customers will continue to change. The challenge to national banks is to understand their customer base and find the right mix of delivery channels to deliver products and services profitably to their various market segments.

14.4 Types of E-Banking

The Reserve Bank of India constituted a working group on Internet Banking. The group divided the internet banking products in India into 3 types based on the levels of access granted. They are:

1) I nformational:

This is the basic level of Internet banking. Typically, the bank has marketing information about the bank products and services on a stand-alone server. The risk is relatively low, as informational systems typically have no path between the server and the bank's internal network. This level of Internet banking can be provided by the bank or outsourced. While risk to a bank is relatively low, the server or website may be vulnerable to alternation. Appropriate controls

therefore must be in place to prevent unauthorized alternations to the bank's server or website.

2) Communicative:

This type of Internet banking system allows some interaction between the bank's systems and the customer. The interaction may be limited to electronic mail, account inquiry, loan applications, or static file updates. The information is still largely of the 'read only' format. Identification and authentication of the customer is through password. Because these servers may have a path to the bank's internal networks, the risk is higher with this configuration than with informational systems. Appropriate controls need to be in place to prevent, monitor, and alert management of any unauthorized attempt to access the bank's internal networks and computer systems. Virus controls also become much more critical in this environment.

3) Transactional:

This level of Internet banking allows customers to execute transactions. Since a path typically exists between the server and the bank's or outsourcer's internal network, this is the highest risk architecture and must have the strongest cont controls. Customer transaction can include accessing accounts, paying bills, transferring funds, etc. In this environment, web server and application systems are linked over secure infrastructure. It comprises technology covering computerization, networking and security, inter-bank payment gateway and legal infrastructure. This transactional system can be used by following methods-

- **Automated Teller Machine (ATM):** ATM is designed to perform the most important function of bank. It is operated by plastic card with its special features. The plastic card is replacing cheque, personal attendance of the customer, banking hours restrictions and paper based verification. There are debit cards. ATMs used as spring board for Electronic Fund Transfer. ATM itself can provide information about customers account and also receive instructions from customers - ATM cardholders. An ATM is an Electronic Fund Transfer terminal capable of handling cash deposits, transfer between accounts, balance enquiries, cash withdrawals and pay bills. It may be on-line or 0ff-line. The online ATM enables the customer to

avail banking facilities from anywhere. In off-line the facilities are confined to that particular ATM assigned. Any customer possessing ATM card issued by the Shared Payment Network System can go to any ATM linked to Shared Payment Networks and perform his transactions.

- **Credit Cards/Debit Cards**: The Credit Card holder is empowered to spend wherever and whenever he wants with his Credit Card within the limits fixed by his bank. Credit Card is a post paid card. Debit Card, on the other hand, is a prepaid card with some stored value. Every time a person uses this card, the Internet Banking house gets money transferred to its account from the bank of the buyer. The buyers account is debited with the exact amount of purchases. An individual has to open an account with the issuing bank which gives debit card with a Personal Identification Number (PIN). When he makes a purchase, he enters his PIN on shops PIN pad. When the card is slurped through the electronic terminal, it dials the acquiring bank system - either Master Card or VISA that validates the PIN and finds out from the issuing bank whether to accept or decline the transactions. The customer can never overspend because the system rejects any transaction which exceeds the balance in his account. The bank never faces a default because the amount spent is debited immediately from the customer's account.
- **Smart Card:** Banks are adding chips to their current magnetic stripe cards to enhance security and offer new service, called Smart Cards. Smart Cards allow thousands of times of information storable on magnetic stripe cards. In addition, these cards are highly secure, more reliable and perform multiple functions. They hold a large amount of personal information, from medical and health history to personal banking and personal preferences.

14.5 Function of E-Banking

Bill payment service

People can facilitate payment of electricity and telephone bills, mobile phone, credit card and insurance premium bills as each bank has tie-ups with various utility companies, service providers and insurance companies, across the country. To pay the bills, need to do is complete a simple one-time registration for each biller. A person can also set up standing instructions online to pay his

recurring bills, automatically. Generally, the bank does not charge customers for online bill payment.

Fund transfer

Customer can transfer any amount from one account to another of the same or any another bank. Customers can send money anywhere in India. Once customer login to his account, he needs to mention the payees's account number, his bank and the branch. The transfer will take place in a day or so, whereas in a traditional method, it takes about three working days. **Credit card customers**

With Internet banking, customers can not only pay their credit card bills online but also get a loan on their cards. If the customer loses his your credit card, he can report lost card online.

Railway pass

This is something that would interest all the aam janta. Indian Railways has tied up with ICICI bank and people can now make their railway pass for local trains online. The pass will be delivered at doorstep.

Investing through Internet banking

Customers now open an FD (Fixes Deposit) online through funds transfer. Now investors with interlinked demat account and bank account can easily trade in the stock market and the amount will be automatically debited from their respective bank accounts and the shares will be credited in their demat account. Moreover, some banks even give you the facility to purchase mutual funds directly from the online banking system. Nowadays, most leading banks offer both online banking and demat account.

Shopping

With a range of all kind of products, you can shop online and the payment is also made conveniently through the account. Customers can also buy railway and air tickets through Internet banking.

14.6 Benefits of E-Banking

The benefits of online banking can be analyzed from the viewpoint of customers, banking organizations and economy in general.

Benefits to Customers

- Anywhere Banking no matter wherever the customer is in the world. Balance enquiry, request for services, issuing instructions etc., from anywhere in the world is possible. The need for going to bank in person for every single banking activity is dispensed with.
- Anytime Banking – Managing funds in real time and most importantly, 24 hours a day, 7days a week.
- Convenience acts as a tremendous psychological benefit all the time.
- Brings down "Cost of Banking" to the customer over a period a period of time.
- Cash withdrawal from any branch / ATM
- Online purchase of goods and services including online payment for the same.
- E-banking lends an added advantage towards payment of utility bills. It eliminates the need to stand in long queues for the purpose of bill payment.
- Sharp growth in credit card/debit card usage can be majorly attributed to e-banking. A customer can shop globally without any need for carrying paper currency with him.

Benefits to the Bank:

- Innovative, scheme, addresses competition and present the bank as technology driven in the banking sector market.
- Reduces customer visits to the branch and thereby human intervention.
- Inter-branch reconciliation is immediate thereby reducing chances of fraud and misappropriation.
- On-line banking is an effective medium of promotion of various schemes of the bank, a marketing tool indeed.
- Integrated customer data paves way for individualized and customized services.
- The concept of online banking has immensely helped the banks in putting a tab over their specific overheads and operating cost.
- The rise of internet banking has made the banks more competitive. It resulted in opening of better prospects and avenues for banking operations.
- The online banking has ensured transparency of transactions and facilitated towards removing the documentation requirements to a major extent, since

majority of records under an e-banking set up are maintained electronically. It is fast and efficient. Funds get transferred from one account to the other very fast. So managing several accounts easily through internet banking.

- It also acts as a great medium for the banks to endorse their products and services. The services include loans, investment options, and many others.

Disadvantages of E-banking

The disadvantages of e-banking include the following:

- Understanding the usage of internet banking might be difficult for a beginner at the first go. Though there are some sites which offer a demo on how to access online accounts, but not all banks offer this facility. So, a person who is new might face some difficulty.
- A person cannot have access to online banking if he does not have an internet connection; thus without the availability of internet access, it may not be useful.
- Security of transactions is a big issue. Account information might get hacked by unauthorized people over the internet.
- Password security is a must. After receiving the password, it is to be changed and memorize it, otherwise account may be misused by someone who gets to know password inadvertently.
- Sometimes it becomes difficult to note whether transaction was successful or not. It may be due to the loss of net connectivity in between, or due to a slow connection, or the bank's server is down.
- Online banking is generally secure, but it certainly isn't always secure. Identity theft is running rampant, and banks are by no means immune. And once the information is compromised, it can take months or even years to correct the damage, not to mention possibly costing you thousands of dollars, as well.
- Customer service can be below the quality. Some people simply take comfort in being able to talk to another human being face-to-face if they experience a problem. Although most major banks employ a dedicated customer service department specifically for online users, going through the dreaded telephone menu can still be quite irritating to many. Again, some are considerably better (or worse) than others.

- Banks sites can be difficult to navigate at first. Getting acquitted with the banking sites software may require some time to read the tutorials in order to become comfortable in virtual lobby.

14.7 Risks associated with Internet banking

A major driving force behind the rapid spread of e-banking all over the world is its acceptance as an extremely cost effective delivery channel of banking services as compared to other existing channels. However, Internet is not an unmixed blessing to the banking sector. Along with reduction in cost of transactions, it has also brought about a new orientation to risks and even new forms of risks to which banks conducting e-banking expose themselves. Regulators and supervisors all over the world are concerned that while banks should remain efficient and cost effective, they must be conscious of different types of risks this form of banking entails and have systems in place to manage the same. An important and distinctive feature is that technology plays a significant part both as source and tool for control of risks. Because of rapid changes in information technology, there is no finality either in the types of risks or their control measures. Both evolve continuously. The thrust of regulatory action in risk control has been to identify risks in broad terms and to ensure that banks have minimum systems in place to address the same and that such systems are reviewed on a continuous basis in keeping with changes in technology. In the following paragraphs a generic set of risks are discussed as the basis for formulating general risk control guidelines:

Operational Risk

Operational risk, also referred to as transactional risk is the most common form of risk associated with e-banking. It takes the form of inaccurate processing of transactions, non enforceability of contracts, compromises in data integrity, data privacy and confidentiality, unauthorized access / intrusion to bank's systems and transactions etc. Such risks can arise out of weaknesses in design, implementation and monitoring of banks' information system. Besides inadequacies in technology, human factors like negligence by customers and employees, fraudulent activity of employees and crackers / hackers etc. can become potential source of operational risk. Often there is thin line of difference between operational risk and security risk and both terminologies are used interchangeably.

Security Risk

Internet is a public network of computers which facilitates flow of data / information and to which there is unrestricted access. Banks using this medium for financial transactions must, therefore, have proper technology and systems in place to build a secured environment for such transactions. Security risk arises on account of unauthorized access to a bank's critical information stores like accounting system, risk management system, portfolio management system, etc. A breach of security could result in direct financial loss to the bank. For example, hackers operating via the Internet could access, retrieve and use confidential customer information and also can implant virus. This may result in loss of data, theft of or tampering with customer information, disabling of a significant portion of bank's internal computer system thus denying service, cost of repairing these etc. Other related risks are loss of reputation, infringing customers' privacy and its legal implications etc. Thus, access control is of paramount importance. Controlling access to banks' system has become more complex in the Internet environment which is a public domain and attempts at unauthorized access could emanate from any source and from anywhere in the world with or without criminal intent. Attackers could be hackers, unscrupulous vendors, disgruntled employees or even pure thrill seekers. Also, in a networked environment the security is limited to its weakest link. It is therefore, necessary that banks critically assess all interrelated systems and have access control measures in place in each of them.

System Architecture and Design

Appropriate system architecture and control is an important factor in managing various kinds of operational and security risks. Banks face the risk of wrong choice of technology, improper system design and inadequate control processes. For example, if access to a system is based on only an IP address, any user can gain access by masquerading as a legitimate user by spoofing IP address of a genuine user. Numerous protocols are used for communication across Internet. Each protocol is designed for specific types of data transfer. A system allowing communication with all protocols, says HTTP (Hyper Text Transfer Protocol), FTP (File Transfer Protocol), telnet etc. is more prone to attack than one designed to permit say, only HTTP.

Choice of appropriate technology is a potential risk banks face. Technology which is outdated, not scalable or not proven could land the bank in investment loss, a vulnerable system and inefficient service with attendant operational and security risks and also risk of loss of business.

Reputational Risk

Reputational risk is the risk of getting significant negative public opinion, which may result in a critical loss of funding or customers. Such risks arise from actions which cause major loss of the public confidence in the banks' ability to perform critical functions or impair bank-customer relationship. It may be due to banks' own action or due to third party action.

The main reasons for this risk may be system or product not working to the expectations of the customers, significant system deficiencies, significant security breach (both due to internal and external attack), inadequate information to customers about product use and problem resolution procedures, significant problems with communication networks that impair customers' access to their funds or account information especially if there are no alternative means of account access. Such situation may cause customer-discontinuing use of product or the service. Directly affected customers may leave the bank and others may follow if the problem is publicized.

Legal Risk

Legal risk arises from violation of, or non-conformance with laws, rules, regulations, or prescribed practices, or when the legal rights and obligations of parties to a transaction are not well established. Given the relatively new nature of Internet banking, rights and obligations in some cases are uncertain and applicability of laws and rules is uncertain or ambiguous, thus causing legal risk.

Other reasons for legal risks are uncertainty about the validity of some agreements formed via electronic media and law regarding customer disclosures and privacy protection. A customer inadequately informed about his rights and obligations, may not take proper precautions in using Internet banking products or services, leading to disputed transactions, unwanted suits against the bank or other regulatory sanctions.

Money Laundering Risk

As Internet banking transactions are conducted remotely banks may find it difficult to apply traditional method for detecting and preventing undesirable criminal activities. Application of money laundering rules may also be inappropriate for some forms of electronic payments. Thus banks expose themselves to the money laundering risk. This may result in legal sanctions for non-compliance with "know your customer" laws. To avoid this, banks need to design proper customer identification and screening techniques, develop audit trails, conduct periodic compliance reviews, frame policies and procedures to spot and report suspicious activities in Internet transactions.

Cross Border Risks

Internet banking is based on technology that, by its very nature, is designed to extend the geographic reach of banks and customers. Such market expansion can extend beyond national borders. This causes various risks. It includes legal and regulatory risks, as there may be uncertainty about legal requirements in some countries and jurisdiction ambiguities with respect to the responsibilities of different national authorities. Such considerations may expose banks to legal risks associated with non-compliance of different national laws and regulations, including consumer protection laws, record-keeping and reporting requirements, privacy rules and money laundering laws.

Strategic Risk

This risk is associated with the introduction of a new product or service. Degree of this risk depends upon how well the institution has addressed the various issues related to development of a business plan, availability of sufficient resources to support this plan, credibility of the vendor (if outsourced) and level of the technology used in comparison to the available technology etc. For reducing such risk, banks need to conduct proper survey, consult experts from various fields, establish achievable goals and monitor performance. Also they need to analyse the availability and cost of additional resources, provision of adequate supporting staff, proper training of staff and adequate insurance coverage. Due diligence needs to be observed in selection of vendors, audit of their performance and establishing alternative arrangements for possible inability of a vendor to fulfill its obligation. Besides this, periodic evaluations of new technologies and appropriate consideration for the costs of technological up gradation are required.

Credit risk

Credit risk is the risk that a counter party will not settle an obligation for full value, either when due or at any time thereafter. Banks may not be able to properly evaluate the credit worthiness of the customer while extending credit through remote banking procedures, which could enhance the credit risk. Presently, banks generally deal with more familiar customer base. Facility of electronic bill payment in Internet banking may cause credit risk if a third party intermediary fails to carry out its obligations with respect to payment. Proper evaluation of the creditworthiness of a customer and audit of lending process are a must to avoid such risk.

Liquidity Risk

Liquidity Risk arises out of a bank's inability to meet its obligations when they become due without incurring unacceptable losses, even though the bank may ultimately be able to meet its obligations. It is important for a bank engaged in electronic money transfer activities that it ensures that funds are adequate to cover redemption and settlement demands at any particular time. Failure to do so, besides exposing the bank to liquidity risk, may even give rise to legal action and reputational risk.

Risk of Unfair Competition

Internet banking is going to intensify the competition among various banks. The open nature of Internet may induce a few banks to use unfair practices to take advantage over rivals. Any leaks at network connection or operating system etc., may allow them to interfere in a rival bank's system.

14.8 E-banking Fraud

The rapid growth of internet over the past several years has increased the use for Electronic commerce. E-commerce is done online without face to face interaction. Several Electronic payments systems (EPS) have been developed and are increasing used in e-business. This has given birth to electronic frauds and it has become a major problem in the electronic payment system. As internet increases business opportunities, there are new fraudulent and sophisticated techniques being developed by fraudster. For the merchant managing frauds has

been major and growing cost. There are different types of fraud in e-banking. Fraud can occur in a number of ways as listed below.

Account Hacking

Hacking includes gaining illegal entry into a personal computer (PC) system. Fraudster use compromised customer credentials to hijack the origination system and use it in the lawful account holder's name. Corporation are also targeted and also seen on a rise.

Identity theft

Identity theft/fraud refers to crime in which fraudster illegally obtains and uses another person's personal information in some way that involves deception or fraud to gain something of value. Identity theft/fraud is the most serious crime for the person whose information is stolen as well as the financial institution.

Phishing

Phishing is a well-known technique for obtaining confidential information from a user by posing as a trusted authoring. Phishing is an attempt by fraudster to 'fish' for baking details through emails with attachment or hyperlinks. The e-mail appears to be send from legitimate organization to trick people in order to reveal sensitive information. On clicking the attachment or the hyperlink the computer system get infected with malware. During the next online transaction the malware will activate and steal private and personal financial information, including credit card numbers, PIN number which is used by fraudster to steal money from the account. Malware or 'Malicious Software' is software which includes computer viruses, worms, Trojan Horses, spyware and other malicious software.

Spoofing or Website cloning

This is an act of creating a hoax web site or to say duplication of a website for criminal use. The fraudsters use legitimate companies name, logos, graphics and even code. This usually take form of know chat room or trade sites where in people would innocently giving out personal information to criminals or make a fake purchase of a product the does not exist.

Internet Gambling (Virtual casinos)

The Internet has made certain types of gambling possible. A person in India or china from his home can participate in internet poker game in Caribbean over the Internet. Although there are operating online casinos in an honest manner, the

potential for fraud connected with casinos and bookmarking operations is far greater. Online gambling establishment appear and disappear with regularity, collecting from losers and not paying winners without any fear of being appended and prosecuted.

ACH Frauds

Automated Clearing House (ACH) Fraud is basically information fraud. With the increase in ACH transactions for corporate payments obviously there is increase in the ACH frauds. The fraudsters access the account information and route number illegitimately to steal funds directly from accounts. Government payment, payroll and other online payment face these frauds.

Cheque frauds

Cheque frauds continue to be a threat to financial security. Electronic check frauds can be easily committed; the fraudster needs scanner, printer and desktop phishing software. The most common forms of Cheque fraud include altering Cheque, forging endorsement, counterfeiting checks and creating remote checks.

14.9 Summary

E-banking is becoming immensely popular in India. The number of ATMs in India, particularly in rural areas, is on the rise and customers irrespective of their profile started accepting ATM as a channel for banking transactions, both internet and mobile banking is gaining popularity but considering the rapid penetration of mobile phones in India, the potential for delivering banking services through mobile phones is immense compared to internet as a delivery channel.

Information Technology has played a vital role in the advancement of banking system. The reach of Indian banking to every individual is possible because of the computerization process adopted by banking sector. Information technology has not only simplified the operation but it has also given a great comfort an individual who does not have a god knowledge of Information Technology but need to access banking in an optimum manner.

Internet Banking Fraud is a fraud or theft committed using online technology to illegally remove money from a bank account and/or transfer money to an account in a different bank. Internet Banking Fraud is a form of identity theft and is usually made possible through techniques such as phishing. Now internet

banking is widely used to check account details, make purchases, pay bills, transfer funds, print statements etc. Generally, the user identity is the customer identity number and password is provided to secure transactions.

14.10 Self-Assessment Test

1. What do you understand by e-banking? Discuss its function.
2. Describe the various types of e-banking.
3. What are the advantage and disadvantage of e-banking?
4. What is E-banking Fraud? Explain its various ways.
5. Discuss the Risks associated with Internet banking.

14.11 Suggested Readings

- Mr. Arun Kumar Kaushik, "E-Banking System in SBI"
- Dr. Roshan Lal and Dr. Rajni Saluja, "E-Banking: The Indian Scenario"
- Miss.K.Saranya and Miss.K..S.Gunasri, "Challenges in E-Banking"
- Majid Karimzadeh, "Electronic Banking Challenges in India: an Empirical Investigation"
- Deepshikha Jamwal and Devanand Padha, "Internet Banking Systems in India: Analysis of Security Issues"
- Shilpan Vyas, "Impact of E-Banking on Traditional Banking Services"
- Jayshree Chavan, "Internet Banking- Benefits and Challenges in an Emerging Economy"
- N. Jamaluddin, "E-Banking: Challenges and Opportunities in India"
- Pooja Malhotra and Balwinder Singh, "The Impact of Internet Banking on Bank Performance and Risk: The Indian Experience"
- Parameshwara, "E-Banking system in India and Cyber Frauds"

Unit-15
Tax Evasion through E-Commerce

Objectives:

After going through this Unit you should be able to understand:

- Problem of tax evasion in India
- Reasons for Tax Evasion in India
- Effect of Tax Evasion and government measure in India

Structure:

15.1 Introduction
15.2 Tax Evasion
15.3 Reasons for Tax Evasion in India
15.4 Different ways of Tax Evasion in India
15.5 Tax Evasion through E-commerce
15.6 Measure taken by Indian Government to Curb Tax Evasion
15.7 Summary
15.8 Self-Assessment Test
15.9 Suggested Readings

15.1 Introduction

The rise of e-commerce has a high impact and new questions on taxation policy and administration. E-commerce makes it easier for business to be conducted without creating the "permanent establishment using bricks and mortar" that would otherwise subject a seller to tax on income. It blurs the distinctions between the sale of goods, the provision of services and the licensing of intangible assets, each of which is subject to some form of taxation. Rapid developments in information technology have not only had an impact on assessing tax liability and collecting revenue, but on the State's ability to identify the growing number of taxable transactions that take place in cyberspace.

15.2 Tax Evasion

Tax evasion occurs when individuals deliberately fail to comply with their tax obligation. The resulting tax revenue loss may cause serious damage to the proper functioning of the public sector, threatening its capacity to finance its basic expenses. In India, most of the persons do not pay their taxes. They try to avoid this by some illegal means or by taking the benefit of some loopholes in the Indian tax system. Tax evasion is the term for the efforts by individuals, corporate, trusts and other entities to evade taxes by illegal means. It is the deliberate, misrepresentation or concealment of the true state of their affairs to the tax authorities to reduce their tax liability or to avoid the tax liability by declaring less incomes, profits or gains than actually what they earned or overstating their expenses. Thus the amount which would have been used for economic and social development is used for anti social activities. All this creates black money and social evils in the society. Thus tax evasion is not a problem in development of country but also harmful for the country. The level of Evasion Tax also depends on the chartered accountants and tax lawyers who help companies, firms, and individuals evade paying taxes. Tax Evasion is a crime in all major countries and the guilty parties are subjected to imprisonment and fines.

Tax evasion is the way people evade tax by illegal and unfair means. They may claim lesser profit, gains or turnover than actual. Even if there is huge amount of tax to be paid, evaders get refund by making misrepresentations before tax authorities. Huge amount of revenue is lost through this way for government so that we cannot climb from economic stagnation. Most of the welfare activities for poor are put on hold due to lack of money while some people who can buy even the government with black money are growing daily

The implications of e-commerce for tax systems are wide-ranging. From the perspective of tax administrator, the new communications technologies such as internet and computers open up possibilities to improve the administration of tax systems but also open up new avenues for tax evasion and avoidance. Governments are continuously striving to reduce the problem of tax evasion because without taxation survival of any government is at stake. Therefore, there is a need to properly understand tax evasion dimensions and develop a sound strategy to tackle it. Tax evasion is not a new phenomenon; it has been in existence for a

long time and still continues to prevail and impose growing challenges on tax authorities and governments. Tax evasion is the minimization of one's tax liability by way that violates the provisions of the tax codes. It is therefore observed an offence, and could lead to the imposition of criminal proceedings against the offender.

Government of India imposes different taxes on business house. Value Added Tax is a multi point sales tax with set off for tax paid on purchases. It is basically a tax on the value addition on the product. In many aspects it is equivalent to last point sales tax. It can also be called as a multi point sales tax levied as a proportion of Valued Added. The second one is the service tax, which is imposed on the services or consultancy provided by the professional. So issues in tax evasion are:

1. Vat tax as it is a multipoint tax, as per the nature of E-business, it directly involves consumer with business (B2C). Since the different points are decreased so the tax is reduced and it result is tax loss of the Government.
2. Service sector covers approx 80% of the share of total turnover of E-commerce transactions. Service sector on recommendation of finance commission gives some share to the state. But the services provided by dot com companies give the whole tax to one state only. So the other state income is lost due to nature of the business.
3. The provision of services and the licensing of intangible assets, each of which is subject to some form of taxation and other taxes such as municipal taxes, professional taxes, are too reduced of the state Government.

Difference between Tax Evasion and Tax Avoidance

Tax evasion is a contravention of the tax laws, whereby a taxable individual or company neglects to pay the tax due, or reduces the tax liability by making fraudulent or untrue claims on the income tax form. It is the general term for efforts not to pay taxes by illegal means. It usually entails taxpayers deliberately misrepresenting or concealing the true state of their affairs to the tax authorities to reduce their tax liability. On the other hand, tax avoidance arises in a situation where the taxpayer arranges his financial affairs in a way that would make him pay the least possible amount of tax without infringing the legal rules. It is a term used to denote those various devices which have been adopted with the aim of saving tax and thus sheltering the taxpayer's income from greater liability which would have been otherwise incurred. Tax avoidance has also been defined as the legal

utilization of the tax regime to one's own advantage, in order to reduce the amount of tax that is payable by means that are within the law. The conceptual distinction between tax evasion and tax avoidance hinges on the legality or otherwise of the taxpayer's actions. Tax evasion is a violation of the law and, in evading taxes, the taxpayer worries about the possibility of his actions being detected. Tax avoidance, however, is within the legal framework of the tax law. It consists of exploiting loopholes in the tax laws in order to reduce one's liability. In engaging in tax avoidance, the tax payer has no reason to worry about the possibility of his actions being detected. Thus, it can be said that whereas tax avoidance is permissible, tax evasion, on the other hand, is illegal and gives rise to penalties or interest, and in some cases imprisonment.

15.3 Different ways of Tax Evasion in India

Ways through which people evade tax are snuggling, evasion of sales and Value Added Tax, evasion of Income Tax, Evasion of Wealth Tax, Evasion of Customs Duty and Evasion of Excise Duty. Also, officials take bribery and help in making misrepresentations and fabricated financial statements instead of reporting to tax authorities. Evaders willfully fails to file return, submits false returns, submits false certificates to get deductions, exemptions and claim low income, charging personal expenses to revenue, fails to pay dues within due date and so on to evade tax. There are numerous ways to evade or avoid that. Some of the conventional practices are mentioned below:

- Money Laundering
- Tax Havens
- Transfer Pricing
- Trade Mispricing

These processes are followed to evade both direct and indirect taxes.

- **Money Laundering**

The term money laundering is used to refer to the process of showing illegal money as being generated through legitimate sources. It literally means washing of illegally obtained money to hide its true nature or source. A working definition was adopted by the Interpol General Assembly in 1995, defines it as

'any act or attempted act to conceal or disguise the identity obtained proceeds so that they appear to have originated from legitimate source.

A high prevalence of black money in a country adversely affects its economy and growth, and is reflected in poor socio-economic indices. In an economy where black money is widespread, the resources for developmental purposes would also be lacking. One of the most important consequences of money laundering is rampant tax evasion. Since the laundered money cannot be sourced, it cannot be taxed either and this means a substantial loss of public revenue from the most convenient tax source of public finance.

- **Tax Haven**

Tax havens are locations with zero or low rates to attract foreign capital and business. However, there is no precise definition of tax haven. The OECD initially defined tax haven in terms of countries or territories that have the following features:

- Zero or low axes
- Lack of effective exchange of information/lack of tax information exchange with the other countries and even if this persists there is exchange for fraud and money laundering
- Lack of transparency
- A high degree of bank secrecy
- Lack of real economic activity associated with the income generated
- Tax havens are small countries
- Population is less than one million
- Tax havens are generally more affluent than other countries.

Banks for International Settlement (BIS) data shows that almost half of international loans and one-third of Foreign Direct Investment are routed through tax havens since early 1980s, avoiding substantial amount of taxes worldwide. A large amount of financial resources do not generate the presupposed benefit of FDI (employment, innovation, technology spillover, etc,) and the sole purpose of circulation is to escape legitimate tax payments.

- **Transfer Pricing**

Transfer price is the price at which goods and services between related companies are transacted. The main branch of a company is called the parent

company and a number of associated units spread in different countries or locations are called its subsidiaries.

The drawback in this case is because of the unfixed prices. As per the Transfer Pricing laws followed by various countries, it should be a fair one, that is, a price that would be charged between the parent and the subsidiary companies as if they were unrelated companies. However, companies often manipulate the transfer price to escape taxes.

Theoretically, the concept and practice of transfer price is not illegal. The idea underlying transfer pricing is optimal allocation of a firm's resources by minimizing costs. The practice can be accepted if the transactions between the parent company and its subsidiaries or between subsidiary firms can be done at the market price. Smaller manipulations might be tolerated but over the years, transfer prices have been severely manipulated in order to shift profits to low tax countries from to low tax countries from high tax countries.

- **Trade Mispricing**

Trade mispricing refers to intentional over invoicing or under invoicing of exports and imports in order to escape taxes. Trade mispricing occurs when the import or export price for a particular good is invoiced at a level that either exceeds the market prices or is below the market price.

15.4 Reasons for Tax Evasion in India

The principles causes of tax evasion are:

1. High rate of taxation- High rate of taxation cause a burden to tax payer. So, they find ways to avoid tax.
2. Failure to curb bribery- There is no adequate system to curb bribery and corruption among officials. They help taxpayers to avoid tax by taking an agreed share of profit out of evaded tax.
3. Lack of simplified procedures- Tax structure in India is complex and people find it hard to go to different departments for a single matter.
4. Existence of large number of taxes- Existence of large number of different type of taxes causes burden on taxpayers.
5. Complex tax laws and loopholes to avoid tax in laws- Indian tax law is complex. In the same law, people find provisions to escape from tax liability.

6. Frequent changes in Government and Political instability- Frequent changes and political instability are another reason of non-implementation of well-defined tax system. Different governments implement different tax system and it becomes difficult to follow.
7. Frequent changes in tax policies- Tax policies in India are changed frequently by government. It creates confusion among tax payers and officials about the relevant provisions.
8. Lack of organized and systematic administration structure.
9. Deficiencies in implementing Penalty Provisions.

Effect of Tax Evasion in India

Taxes are the major source of revenue in India Government. Tax evasion causes economic inequality that is how some people are getting richer and other are getting poorer. Many reform measures and initiatives of government have to be set aside and welfare activities are getting affected.

Tax evasion and thereby establishment of parallel economy has been creating the serious impacts on the social and economic system of the country. Tax evasion has been causing reduction in country's economic growth as an enormous volume of income is diverted to this unaccounted sector resulting in growing continuation of parallel economy of the country. However, the direct effect of tax evasion is the loss of revenue, increase in inflation. Tax evasion has resulted in the diversion of resources for the purchase of real estate and luxury housing. Moreover, Black money has resulted in transfer of funds from India to foreign countries through clandestine channels which decrease country's reputation globally. High tax rates, corruption in public sector units, multiple tax rates and inefficient tax authorities are the main causes of tax evasion.

15.5 Tax Evasion through E-commerce

E-commerce is a new buzzword in the last decade and is likely to grow exponentially every year in a developing country like India. It is expected that e-commerce might have a growth in overall trade market. According to IAMAI (Internet & Mobile Association of India) report it is found that 40% of internet users in India use e-commerce websites to find the price of product.

Google revealed in the survey that 67 percent of e-commerce happens on mobile devices and as many as 40% of all Google searches in India are done using

mobile phones. Further in IAMAI report, it states that 80% market share of current online commerce industry is dominated by travel business in which 63% by domestic air ticket booking and 27% by online Railway ticket, and remaining 20% share constitutes of non-travel businesses such as electronic retailing, digital download, paid content subscription, financial services, online classifieds, etc. Online travel industry i.e., service sector is dominating the online e-commerce industry since last 5 years. However, online users in India have exhibited willingness to make purchases over the internet, which is evident from the increasing awareness and growth of net commerce industry.

Electronic retailing is also growing very fast in India. This year electronics items like mobile phones, laptops, cameras, home appliances, personal products like apparels and jewelry and other accessories had a market share of worth Rs. 2,550 core, which is expected to grow by 30% next year.

E-commerce has a variety of impacts on direct and Indirect taxes imposed in India. India faces the difficulty in taxing e-commerce justly and efficiently, but a feasible solution is to be found which depends on economic conditions, social and political features.

In Tata Consultancy services v. State of Andrapradesh, there arose a question whether branded software which is an intangible intellectual property being a product of thought creativity and intellect be classified as "goods" for the purpose of Andra Pradesh General Sales Tax Act. They held that when a person goes to buy a CD containing the software he does not pay for the mere CD but for the software contained in the CD. The contention that software is merely "knowledge or intelligence" and such is not corporeal and thus, not taxable is erroneous. Once the information or knowledge is transformed into physical existence and recorded in physical form, it is no longer in intangible form but a corporeal property and hence taxable.

The Government of India had set up a committee to go into the various questions regarding taxation of e-commerce. The Kanwarjit Singh committee submitted its report to the Central Board of Direct Taxes and it has made certain recommendations on e-commerce and taxation. Government is making effort to create a balance between economic growth and generation of revenue in the InfoTech global environment. The issues raised by e-commerce taxation are complex and the subject is controversial in nature because it has created serious

conflict of interest between developed and developing nations. Unique features of interest also add to the existing confusion. Income Tax Act, 1961 and Finance Act, 2003 etc, are silent about e-commerce taxation.

Tax Evasion and the Internet

Some of the Conventional tax evasion measures undertaken by companies are

- Shifting of profits to low tax Countries by transfer pricing. Thin capitalization
- Allocation of costs operation artificially either against domestic profits or foreign profits depending on where the rates of tax are less favorable.
- Setting up conduit or intermediary companies outside the home country to process and channelize income from different foreign source.
- Establishing base companies in tax havens or legal domicile.

The problem of the Internet is that all of these become much easier with location being quite irrelevant in the borderless world.

15.6 Measure taken by Indian Government to Curb Tax Evasion

Several steps have been taken by Indian Government to avoid tax evasion. In India, tax evasion is regarded as a crime. Prosecution and penalties are imposed under different acts by government. Income tax reward scheme has been introduced by Income Tax Department which gives rewards to informers about tax evasion. India has been entered into pact with US to avoid tax evasion by Americans through Indian financial organizations. Special Bearer Bond Scheme (Immunities and Exemptions Act, 1981) enable person in possession of black money to invest in special bonds. Voluntary compliance scheme was another one. Government increased the tax slab, reduced deduction rate and increased legal tax avoidance measures. Tax Administration Reform Commission was set up by the government to make structural reform to tax matters to simplify and streamline tax procedures. India had set up several committees like Taxation Enquiry Committee, Indian Tax Reforms Committee and Direct Taxes Enquiry Committees etc. Transfer pricing Audit was introduced by Finance Bill to audit undisclosed transactions to curb tax evasion. Raids are conducted from time to time by the tax enforcement machinery, on the premises of the people who are suspected of

possessing black money. After the raids, wide publicity is usually given to the amount of money and other assets that are seized. Following the recommendation of the Wanchoo Committee, the Settlement Commission was established in 1976. Its objective was to provide a mechanism for the quick and final disposal of these cases, where tax evader was willing to make confession and face the consequences.

India has tried to combat tax evasion by requiring an identification number for all major financial deals. The Permanent Account Number (PAN) is a compulsory 10 character number issued to taxpayers by the tax department. But many transactions, especially those related to property, are conducted in cash and are unlikely to be reported. In the fiscal year 2007 – 2008, the country's high – value transactions amounted to more than 55.7 trillion rupees, according to India's Annual Information Return filed with the government. But nearly one third of the 3.3 million transactions were conducted without a PAN. In many other transactions, PAN numbers were fake. To stop tax evasion, tax laws also provide monetary penalties for the prosecution (and imprisonment) of tax evaders.

The e-commerce presents both challenges and huge opportunities for taxation and tax administration. The tools and techniques of e-commerce that can assist tax payers in their dealings with e-government should be designed and developed. At the same time the Government is working to develop the policy for the taxation on e-commerce, with business and its international partners. The Indian Government had constituted the High Powered Committee ("HPC") in December 1999, to examine the position of e-commerce transactions under existing taxation laws.

The consequences of the tax evasion increase the black money, give birth to personal economy, decreases the Government revenue and many more. Some of the important principles that should be considered to avoid tax evasion during defining the policies are:

- Neutrality – the taxation of e-commerce should seek to be technology neutral so that no particular form of commerce is advantaged or disadvantaged;
- Certainty and transparency – the rules for the taxation of e-commerce should be clear and simple so that businesses can anticipate, so far as possible, the tax consequences of the transactions they enter into;

- Effectiveness – the tax rules should not result in either double or unintentional non-taxation, and risks from increased evasion and avoidance should be kept to a minimum. The overriding aim should be that the right amount of tax is paid at the right time and in the right country; and
- Efficiency – the tax rules should be efficient, keeping the compliance costs of business and the administration costs of government to the minimum compatible with effective tax administration. Measures to counter evasion or avoidance should be proportionate to the risks which they seek to address.
- Reducing tax rates.
- Make more simplified laws and simplified system.
- Design a well-organized tax administration structure.
- Strengthen anti-corruption policies.
- Increase awareness among taxpayers by conducting seminars, conferences and through media.
- Design a permanent tax structure.
- Ensure the political changes do not affect well defined tax structure. Make tax administration more independent and autonomous without losing final control of Government.
- Audit, tax collection, depositing and filing provisions to be more strengthened and updated.
- Make penalty provisions stronger and avoid its non-implementation.
- Encourage taxpayers to pay tax by more friendly schemes.
- Give relief provisions to huge tax payers.

15.7 Summary

Electronic commerce is an exciting new business medium that is changing traditional relationships between vendors and customers and traditional approaches to the taxation of goods and services. Income tax evasion is common in India. High tax rates, corruption in public sector units, multiple tax rates and inefficient tax authorities are the main causes of tax evasion. Reduction in tax rates,

simplifications of tax laws, remove loopholes in the tax system and some extent proper processing of information available the under the annual information return can be best tool for improving Indian tax compliance. The problem with e-commerce is the inconsistency of state tax regulations and the difficulty of applying the existing tax concepts to electronic commerce. India tax authorities are searching for new strategies to prevent the loss of tax revenue in the cyberspace. There is a need for creating transparent, friendlier and less discriminatory administrative system.

15.8 Self-Assessment Test

1. What do you understand by tax evasion? What are the Reasons for Tax Evasion in India?
2. Distinguish between Tax Evasion and Tax Avoidance.
3. Why is taxation of e-commerce an urgent issue?
4. Discuss the measure taken by Indian government to curb tax evasion.
5. What are the effects of Tax Evasion in India?

15.9 Suggested Readings

- Lalit wadhwa and Dr. Virender Pal, "Tax Evasion in India: Causes and Remedies"
- Roland Paris, "The Globalization of Taxation? Electronic Commerce and the Transformation of the State"
- Mr. Dayana M.K, "E-commerce And Taxation"
- Dr. Neelesh Jain, "Tax Evasion a Dark Side of E-Commerce"
- Otto H. Chang and David C. Yen, "Electronic Commerce: How should it be taxed?"
- Annet Wanyana Oguttu and Beatrix Van Der Merwe, "Electronic Commerce: Challenging the Income Tax Base?"

Unit-16

OECD initiatives in International Taxation

Objectives:

After going through this Unit you should be able to understand:

- Objectives and functions of OECD
- Role of OECD in development of e-commerce
- Concept of Permanent Establishment

Structure:

16.1 Introduction
16.2 Functions of OECD
16.3 Role of OECD
16.4 OECD's Permanent Establishment Concepts in Cyberspace
16.5 The Guidelines for Consumer Protection
16.6 OECD VAT Reform Efforts
16.7 Indian Perspective
16.8 Summary
16.9 Self-Assessment Test
16.1 Suggested Readings

16.1 Introduction

The Organization for Economic Co-operation and Development (OECD) is an international economic organization of 34 countries founded in 1961 to stimulate economic progress and world trade. It is a forum of countries describing themselves as committed to democracy and the market economy, providing a platform to compare policy experiences, seeking answers to common problems, identify good practices and coordinate domestic and international policies of its members. Electronic commerce is a central element in the OECD's vision of the tremendous potential.

Its mandate covers economic, environmental, and social issues. It acts by peer pressure to improve policy and implement "soft law"—non-binding instruments that can occasionally lead to binding treaties. In this work, the OECD cooperates with businesses, with trade unions and with other representatives of civil society. Collaboration at the OECD regarding taxation, for example, has fostered the growth of a global web of bilateral tax treaties.

The OECD promotes policies designed:

- to achieve the highest sustainable economic growth and employment and a rising standard of living in Member countries, while maintaining financial stability, and thus to contribute to the development of the world economy;
- to contribute to sound economic expansion in Member as well as nonmember countries in the process of economic development; and
- To contribute to the expansion of world trade on a multilateral, nondiscriminatory basis in accordance with international obligations.

16.2 Functions of OECD

Organization for Economic Co-operation and Development (OECD) was established to improve the economic and social well-being of people around the world. The OECD provides a forum in which governments can work together to share experiences and seek solutions to common problems. The OECD works with governments to understand what drives economic, social and environmental change. It measures productivity and global flows of trade and investment. It analyses and compares data to predict future trends. The OECD sets international standards on a wide range of things, from agriculture and tax to the safety of chemicals.

The OECD looks at issues that directly affect everyone's daily life, like how much people pay in taxes and social security, and how much leisure time they can take. The OECD compares how different countries' school systems are readying their young people for modern life, and how different countries' pension systems will look after their citizens in old age.

The OECD works with business, through the Business and Industry Advisory Committee to the OECD, and with labour, through the Trade Union Advisory Committee. It has active contacts as well with other civil society

organizations. The common thread of work is a shared commitment to market economies backed by democratic institutions and focused on the wellbeing of all citizens. The OECD also sets out to make life harder for the terrorists, tax dodgers, crooked businessmen and others whose actions undermine a fair and open society.

16.3 Role of OECD

Privacy protection

Privacy protection is a critical element of trust. The 1980 OECD Privacy Guidelines are universally accepted as providing the basic principles of protection of personal data and transformer data flow. The thrust of the OECD's work is to provide practical guidance on implementing the Guidelines. The OECD Online Privacy Policy Generator promotes transparency by helping web sites create privacy policy statements. Other work included an inventory of instruments for privacy protection, an analysis of contractual solutions and an exploration of online alternative dispute resolution mechanisms. Current activities include examining and encouraging the use of privacy-enhancing technologies, promoting user education and awareness about online privacy issues and the tools available to users for protecting privacy. Work is also being undertaken on the issue of privacy and security related to genetic testing data.

Security and authentication

That international collaboration is needed regarding security and authentication has been underlined repeatedly in international fore such as the G8 and in OECD Ministerial meetings. The OECD continues to examine policy and regulatory issues related to the development of secure information and communication infrastructures and technologies while promoting information exchange among public and private sector actors.

In response to a Ministerial mandate, the OECD has prepared a report on progress in Member countries in the area of electronic authentication, which examines how national policy and laws are currently implemented. The aims are to facilitate legal recognition, party autonomy, technology neutrality, global authentication mechanisms and user confidence, and to ensure that there is no legal discrimination in relation to different types of authentication technology.

The OECD also started reviewing the 1992 OECD Guidelines on Security of Information Systems and the 1997 OECD Guidelines on Cryptography Policy and is discussing areas where international policy measures might be appropriate in addressing emerging ICT threats, such as viruses or cracking.

Taxation

Revenue authorities have an important role to play in realizing the full potential of e-commerce. Their twin objectives are to provide a fiscal environment within which ecommerce can flourish while also ensuring that e-commerce does not undermine the ability of government to raise the revenues required financing public services for their citizens.

The Ottawa Taxation Framework Conditions are increasingly accepted worldwide as providing a sound basis for ongoing work. They set out the taxation principles which should apply to electronic commerce ‐ neutrality, efficiency, certainty, simplicity, effectiveness, fairness and flexibility ‐ and outline agreed conditions for taxpayer service, tax administration, consumption tax and international taxation norms. Since they were agreed in 1998 five business-government Technical Advisory Groups (TAGs) provided input into the development of these principles, covering Business Profits, Consumption Tax, Income Characterization, Professional Data Assessment and Technology.

Trade policy and market access

The OECD plays a supporting role in international trade policy, providing analysis on a range of trade issues to complement discussions in the WTO. Work on e-commerce has focused on the trade policy and market access aspects of ecommerce.

The OECD has analyzed WTO Members' commitments for services which can be supplied on-line, as well as the unilateral liberalization measures aimed to promote e-commerce. It has considered the role of on-line customization in the e-commerce activities and, with a view to assisting WTO members in their preparations for the current services negotiations, the possibility of grouping taking a “cluster” approach to input services for e-commerce.

Competition law and policy

An OECD roundtable on Competition Law and Policy issues in electronic commerce focused principally on transaction matters. It explored the efficiencies

of e-commerce marketplaces, as well as the risk that network effects may decrease competition among such marketplaces. It also considered how e-commerce marketplaces might facilitate collusion and the exercise of buyer power, and whether traditional anti-trust tools are sufficient to address competition issues online. A follow up roundtable on competition issues will likely take place in 2002 or early 2003 once competition agencies have acquired greater experience with both the infrastructure and transaction aspects of ecommerce.

The Joint Group on Trade and Competition Policy held a discussion on e-commerce. Attention centered on the need for: enhanced competition in telecommunications to facilitate lower priced access to the Internet; greater competition in international parcel delivery services; and streamlined customs procedures.

Electronic finance

The growth of e-finance led the OECD to undertake a study on the effects of electronic commerce on cross-border trade in financial services. The study, once completed, will deal with current trends as well as potential future developments. The OECD also began work on the implications of e-commerce in financial services for the implementation of the OECD Codes of Liberalization of Capital Movements and Current Invisible Operations. Work also started on the implications of e-finance on contract law and on the issues raised by cross-border electronic delivery of insurance products.

The development of electronic commerce is dependent on the availability and deployment of information infrastructures and universal and affordable access to markets and services appropriate for user-friendly electronic commerce applications. Effective competition in telecommunication markets is crucial, and this in turn depends on appropriate telecommunication policies and regulatory frameworks.

The Internet, governance and the Domain Names System

The OECD continues to develop Internet indicators, and new measurement tools in the area of Domain Names System and Internet traffic exchange, to assist self-governance and access issues. The full economic potential of electronic commerce will only be realized through an environment facilitating its widespread use by businesses, consumers and institutions. The information infrastructure has

the potential to link citizens to each other and to the world, and to foster social cohesion. A clear understanding of the needs of enterprises and citizens is needed.

E-Government

The OECD is continuing to review governments' efforts to use the Internet and other ICT to improve the provision of information and services and strengthening government-citizen connections. The OECD also launched a project aimed at creating a better understanding of how governments succeed in management of major public ICT projects and what lessons can be learned from past failures. Reports on these two projects are in preparation. E-Government is now an ever-present issue in national strategies for ICT and the OECD was a partner in the Naples Third Global Forum on Governance in March 2001.

Small and medium-sized enterprises (SMEs)

ICT offer considerable opportunities for SMEs to grow and to rationalize their business. Although SMEs increasingly use ICT for a variety of commercial and production-related purposes, there is generally a lack of awareness of the full range of their potential.

The OECD prepared a background report for the Conference “Enhancing the Competitiveness of SMEs in the Global Economy: Strategy and Policies” held in Bologna, Italy, in June 2000. This report identified major issues for policy action in view of promoting the use of ICT and electronic commerce among SMEs. Current work on SMEs focuses on the collection of statistics on the diffusion and use of electronic commerce, the analysis of the impact of e-commerce on the business activities of small firms; and best practice policies to promote the use of e-commerce.

Education and skills

There is enormous potential for the growth of electronic commerce in education and training; both in software, as yet only in its infancy, and in terms of the sector's key role in developing the knowledge, skills and intellectual basis for electronic commerce. There is a lack of good quality educational software and a lack of sound public-private partnerships in developing it. More progress seems to have been made in distance education, lifelong learning, and in corporate training.

A related issue being intensively studied at the OECD is the cross-border demand and supply of post-secondary education through the use of new

technologies. The OECD publication learning to Bridge the Digital Divide stressed how important it is to empower people with appropriate educational, cognitive and behavioral skills and tools so that they can access information and knowledge efficiently, effectively and wisely.

ICT and territorial development

The OECD has published a report entitled Information and Communication Technologies and Rural Development. The principal concern is to establish access to high-bandwidth ICT infrastructure at an affordable cost in areas where telecom operators usually do not provide it because of the small market. Another is to create a sufficient level of awareness and training so that existing businesses make a first step towards e-commerce. Under these conditions, inward investment can help create activities such as multimedia content, software design or ecommerce. A study is also underway on ICT in urban areas.

16.4 OECD's Permanent Establishment Concepts in Cyberspace

Tax treaties have created the concept of a "Permanent Establishment" in order to establish a nexus for local country taxation. The OECD Model Treaty defines a Permanent Establishment in Article 5 as "a fixed place of business through which the business of an enterprise is wholly or partly carried on." There is a clear attempt to distinguish substantive economic activity, which creates a taxable presence, from mere "preparatory or ancillary" activity; the latter, although conducted through a "fixed place of business," does not create a taxable permanent establishment. Although not free from doubt, the Permanent Establishment concept, with its requirement of a fixed place of business, tends to lend some certainty to the circumstances in which a foreign person will be subject to tax in a host country. Article 7, of the OECD Model Treaty, the income that is sought to be taxed by the host country must be "attributable to" the economic activity of the permanent establishment.

Article 5 of the OECD Model Tax Treaty also distinguishes when, and under what circumstances, the activity within the host country of an agent of the foreign person will establish the requisite nexus to permit direct taxation of the foreign person's business activities by the host country where there is no "fixed

place of business." A foreign person will not have a taxable presence solely by reason of using an agent, regardless of the type of activity carried out on behalf of the foreign principal. Rather, the agent must be "dependent," that is, dependent both legally and economically, on the foreign person. Beyond that, the agent must be able to enter into contracts in the name of the foreign person, which, at least, means that the agent must be able to bind the foreign person to a contract as a matter of local law. If these indicia are not present, the OECD Model Treaty takes the view that the agent is one of independent status and the principal cannot be taxed by reason of using the agent. In such a case, the host country, in effect, is conceding that the taxation of the agent's income is an appropriate amount of taxing jurisdiction for it to have in the context of the overall transaction.

No "fixed place" of business is required if the foreign person is using a dependent agent. By requiring that the agent be dependent and conclude contracts in the name of the foreign principle, the dependent agency concept is trying to link taxing jurisdiction to the notion of significant economic activity occurring in the host country in relation to the transaction under scrutiny. Because of its insistence on a "fixed place" of business, the Permanent Establishment rule should not create taxation for those taxpayers planning electronic commerce transactions with customers in countries where they have no other business activity. For example, selling widgets over the Internet should not, in and of itself, result in a United States company having a Permanent Establishment in another country; the economic functions creating the income simply would not have occurred in that country.

Nevertheless, there can be no assurance that contemporary international taxation principles lead, inevitably, to such a result. As a practical matter, it can be expected that taxing authorities of net consumers of products and services marketed through Cyberspace will seek out ways in which to tax these transactions. In view of the fact that prior to electronic commerce, most of such transactions would have been readily taxable by the purchaser's country, at least to some extent, under traditional principles, because the seller would need to have distributors within the country to market and sell its products or services there. Reaching for such a position, taxing authorities will seek to develop analogies and analyses that relate electronic commerce transaction flows to fixed places of business that can be found "in-country." In this regard, attention needs to

be drawn to two potential "hooks" upon which a finding of Permanent Establishment existence could be supported. First, there is the issue of whether the geographic presence of a server with the relevant Web site is adequate to create a permanent establishment. Second, there is the issue of whether the ISP creates a dependent agency Permanent Establishment for the foreign merchant.

The Commentary to the Permanent Establishment article of the OECD Model Treaty has something arguably applicable. Paragraph 10 of the Commentary on Article 5 contains a discussion of the circumstances under which activities conducted through automatic equipment such as "gaming and vending machines and the like" may constitute a permanent establishment. In these cases, a Permanent Establishment may exist if "the business of the enterprise is carried on mainly through automatic equipment, the activities of the personnel being restricted to setting up, operating, controlling, and maintaining such equipment."

A Permanent Establishment does not exist if the enterprise merely sets up the machines and then leases the machines to other enterprises. A Permanent Establishment may exist, however, if the enterprise which sets up the machines also operates and maintains them for its own account. This also applies if the machines are operated and maintained by an agent dependent on the enterprise.

Clearly, as the nation most likely to be selling to foreign customers through servers based abroad, India should maximize its taxing jurisdiction by adopting a policy that a server geographically present in a country does not create a permanent establishment. It is also possible to see how other countries, whose tax revenues may be perceived to be threatened, could look to the OECD Commentary for some support, at least by analogy. Nevertheless, as mentioned earlier, ultimately an attempt to treat a server as a taxable Permanent Establishment must fail, in the face of the ease with which the server with the Web site can be relocated off shore.

In late 1999, the OECD's Working Party No. 1 on Tax Conventions and Related Questions released a discussion draft of comments ("OECD Draft") that would clarify the definition of Permanent Establishment in Article 5 of the OECD Model Treaty. The OECD Draft proposes that a Web site, without more, cannot create a Permanent Establishment because it has no "fixed place." However, if the Web site owner owns or leases the server on which the Web site resides, the combination of the two can create a "fixed place of business" for purposes of Article 5.

Under the OECD Draft, the fact that the Web site is hosted on a server owned and operated by an ISP is not enough to analyze the situation as combining the Web site and the server. Moreover, the OECD Draft notes that even in the case where the server is owned/leased by the Web site provider, the server must remain in one place long enough to become "fixed" for purposes of Article 5. Finally, the OECD Draft states that even where a "fixed place of business" exists; a Permanent Establishment will not exist if the activity conducted through the computer equipment is "preparatory or auxiliary." Unfortunately, the OECD Draft offers only vague guidance on this point, directing the reader to a "facts and circumstances" analysis.

Moreover, there is the issue of whether the ISP providing a server creates a "dependent agent." Where the Web site accepts orders after, in effect, establishing all the terms of the sales or services contract with the customer through interactive, but pre-programmed, decision software, and then, again automatically, directs the shipment of the goods or the provision of the services, a basis may exist for analogizing the ISP's server to an agent of the nonresident seller. Arguably, however, the ISP should be an "independent agent." In the typical case, the ISP will be analogous to an independent broker with myriads of "principals" with respect to any one of whom it is not dependent either legally or economically. Beyond that, the computer programs that operate to engage in the transaction probably have been created and installed on the Web site (and thus the server) by the foreign merchant, itself, and not by the ISP; accordingly, it cannot be said that it is the ISP that is entering into contracts in the name of the foreign merchant, although it may provide the equipment--the server--that enables this to occur.

The OECD Draft essentially agrees that a typical ISP cannot provide a "dependent agency" Permanent Establishment with respect to the provider of the Web site. More importantly, the OECD Draft is conclusive that the Web site itself cannot be a dependent agent. This is because a dependent agent must be a "person," according to the OECD Model Treaty, and a computer program, no matter how sophisticated, is not a "person."

ISPs providing online or database services in their own right may themselves be treated as having a Permanent Establishment where they actively provide such services, e.g., America on line's extensive organization of electronic information and provision of "front end" entry into the Internet, particularly if

those activities are classified as "services" for tax purposes. By contrast, if the activities are treated as the sale of property, the ISP can argue that it does not have a permanent establishment, but merely a facility used "solely for the purpose of storage, display or delivery of goods."

As the OECD Draft concludes, a Web site, alone, should not qualify as a "fixed place of business." As noted, it is, by its nature, ephemeral, a collection of electrons organized into bits of data. It can be moved from one server to another with great ease. Thus, it does not have the "permanence" envisioned by the concept of a "fixed place of business." One is tempted to apply the analogy of the tax treatment of sales through a mail-order catalog to electronic commerce transactions through a Web site. At first blush, this seems an extremely apt analogy; some Web sites don't arise to much more than a listing of products coupled with an order form. In those cases, the Web site isn't much more than an electronic catalog, advertising products and soliciting sales. However, as electronic commerce becomes more interactive, customers will, in effect, be inquiring about specific products and terms of sale, and the transaction looks less and less like a purchase from a mail order catalog. As one commentary has put it:

Computers and telecommunications equipment at present, and in the future, may do more than routinely execute commands. This equipment may perform credit checks, enter into purchase and sales agreements and perform other functions that, if performed by individuals located in the United States, would be found to comprise a U.S. trade or business and permanent establishment.

Clearly, the technology and the marketplace that takes advantage of it are going to present challenges to the simple adaptation of traditional Permanent Establishment concepts to the world of electronic commerce. The OECD Draft has already been criticized for not addressing a number of the issues surrounding its general principles.

16.5 The Guidelines for Consumer Protection

At the end of 1999, and after 18 months of negotiation, the OECD completed and adopted Guidelines for Consumer Protection in the Context of Electronic Commerce. The Guidelines set out the core characteristics of effective consumer protection for on-line business-to-consumer transactions. These

Guidelines are proving helpful to governments, business, and consumers in very practical ways in trying to deal with this new environment as they provide instructive principles for both applying existing laws and developing new ones if necessary as they work to establish consumer protection mechanisms for e-commerce.

The Guidelines are a first step in encouraging a global approach to consumer protection in the on-line marketplace, a sector that is inherently international -- borderless. They facilitate on-line commerce consumer protection mechanisms without erecting barriers to trade and by increasing consumer confidence in e-commerce; they have the ability to help e-commerce reach its full potential. Eight simple concepts form the basis of the recommendations. They are:

Transparent and Effective Protection

E-commerce consumers should be no less protected when shopping on-line than when they buy from their local store or order from a catalogue.

Fair Business, Advertising and Marketing Practices

Advertising should be clearly identifiable. Businesses should respect consumers' choices not to receive e-mail they don't want. Business should take special care when targeting children, elderly, and others who may lack the capacity to understand the information as presented.

Online Disclosures about the Business, the Goods and Services, and the Transaction

Disclosure should include complete and accurate information about the business, about the goods or services for sale and about how the transaction is made. What this means is that e-customers should know which business they are really dealing with. They should have a complete description of what they are buying. And they should have enough information about the transaction process to be able to make an informed decision.

Confirmation Process

The confirmation process for a sale should give the consumer a chance to see what he has agreed to buy and to change his mind if he wants before the purchase is completed.

Secure Payment Systems

Payment systems need to be secure and easy to use.

Redress

In an international transaction, redress is one of the most difficult areas to address, and the OECD recommendations recognize that further work is needed. The Guidelines articulate the principle that international e-commerce transactions are subject to an existing framework on applicable law and jurisdiction, but that it may be necessary to modify, or apply differently, this framework to make it effective to provide redress for e-commerce. The use of alternative dispute resolution is strongly recommended.

Privacy

The OECD has been at the forefront of international privacy work for decades. Over 20 years ago, the OECD developed Guidelines Governing the Protection of Privacy and Transformer Flows of Personal Data (1980). These Guidelines were developed long before everyone started worrying about privacy in e-commerce (because there was no e-commerce). Still today, the OECD Privacy Guidelines are considered to be a "flagship" OECD document and still serve member countries as the basis for current international work on privacy in the on-line environment. The Guidelines set out eight principles:

- Collection limitation principle
- Data quality principle
- Purpose specification principle
- Security safeguards principle
- Openness principle
- Individual participation principle
- Accountability principle

The OECD Consumer Protection Guidelines point directly to the 1980 Privacy Guidelines as the benchmark for providing privacy protection by recognizing that "business-to-consumer e-commerce should be conducted in accordance with the recognized principles set out in the 1980 OECD Privacy Guidelines."

The OECD Guidelines encourage governments, business and consumers to work together to educate consumers about electronic commerce, to foster informed decision making by consumers participating in electronic commerce, and to

increase business and consumer awareness of the consumer protection framework that applies to their on-line activities.

16.6 OECD VAT Reform Efforts

The OECD traditionally promotes reform efforts in the international income arena primarily via its model tax treaty and the Commentary to this treaty. All OECD members (other than the United States) employ federal consumption taxes alternatively referred to as Value- Added Taxes or Goods and Services Taxes (collectively referred to as VATs). Yet there are generally no model treaties or bilateral international agreements that cover VATs. As a result, there is no apparent mandate for the OECD to promote reform efforts for VATs and, prior to the rise of e-commerce; the organization had never pursued any meaningful reform efforts in this area.

In 1998 the OECD members agreed through the Ottawa Taxation Framework to consider VAT reform efforts in the context of global e-commerce. Importantly, the Ottawa Taxation Framework resolved an ongoing debate among OECD member states surrounding the appropriate tax jurisdiction for cross-border VAT purposes: the OECD countries agreed that for business-to-consumer (B2B) supplies the place of consumption should be the jurisdiction in which the recipient has his or her usual residence and for business-to-business (B2B) supplies tax should apply in the jurisdiction in which the recipient has located its business presence. This development helped to legitimize the European Union efforts, discussed subsequently, to impose collection and remittance obligations on non-European Union consumers who have engaged in B2C transactions with European businesses.

After 1998, the OECD developed guidelines for tax collection mechanisms for cross-border VAT purchases and began to publish a 'Consumption Tax Guidance Series' to promote consensus on the application of VATs with respect to international transactions. More specifically, an effort has been undertaken to promote consensus on reform efforts to: verify the jurisdiction and status of customers; contemplate registration thresholds whereby companies with below threshold sales would not need to register for VAT purposes; deploy technology-based collection mechanisms; develop international administrative cooperation;

and review simplification options and initiatives. Importantly, the views of business representatives and non-OECD governments were taken into consideration with respect to potential cross-border VAT reform efforts.

16.7 Indian Perspective

India is likely the most active non-OECD member with respect to developing positions on the taxation of international e-commerce. In 2001, a report prepared by the Indian Revenue Department's Foreign Tax Division advised the abandonment of the traditional permanent establishment concept in light of e-commerce developments:

The Committee is of the view that applying the existing principles and rules to e-commerce does not ensure certainty of tax burden and maintenance of the existing equilibrium in sharing of tax revenues between countries of residence and source. The Committee is also firmly of the view that there is no possible liberal interpretation of the existing rules, which can take care of these issues, as suggested by some countries. The Committee, therefore, supports the view that the concept of permanent establishment should be abandoned and a serious attempt should be made within OECD or the UN to find an alternative to the concept of Permanent Establishment.

In addition, the report disagreed with the OECD's view on withholding taxes, in particular the tax authorities maintained that software downloads should generally fall within definition of royalties found within Indian tax treaties and should be subject to withholding. The report noted that the Indian tax rules that classify cross-border income coincided with only 15 of the 28 categories set out within the OECD's income characterization paper.

In 2002, the Indian government announced in its annual budget that it would not immediately implement the Foreign Tax Division's recommendations due to the ongoing international discussions of e-commerce taxation issues.

In one case, Indian tax authorities assessed taxes on the profits attributable to an Indian-based server owned by VISA (a U.S.-based multinational firm). VISA requested a resolution by U.S. and Indian tax authorities under the competent authority's provision of the U.S.-India tax treaty. The settlement remains confidential although it has been reported that the U.S. and Indian competent

authorities agreed the server will constitute a permanent establishment (the amount of profits attributable to this server remains unclear).

There are additional reports that India assessed withholding taxes on foreign e-commerce firms. However, India's Income Tax Appellate Tribunal (ITAT) reportedly declined to assess withholding taxes on payments for periodic subscription fees paid by an Indian company to a U.S. company for electronic access to published materials. The materials were maintained on a database within a server located outside of India and the payments were held to be payments for business profits rather than royalties and thus not liable to tax in India in the absence of a permanent establishment. The ITAT found that the payment to the non-resident company was for the use of copyrighted material and not for the transfer of the copyright itself. Moreover, the ITAT indicated that payment for access to an electronic database cannot be said to be consideration "for use of information concerning industrial, commercial or scientific experience" so as to fall under the definition of royalty under article 12(3)(a) of the India- U.S. tax treaty. The ITAT's ruling appears to be consistent with the OECD's views, noted previously, on the characterization of royalty and business income with respect to cross-border e-commerce subscription payments.

In 2004, Indian tax authorities issued a Circular that sets out how foreign businesses (Business Process Outsourcing Units or BPOs) are to be taxed when they outsource aspects of their operations to individuals and businesses residing within India. When foreign companies outsource activities to Indian-based technology centers (which constitute a permanent establishment) and these activities enable the foreign firms to carry on core business activities abroad, the Circular maintained that India should be entitled to tax profits attributable to sales generated abroad (provided that the Indian permanent establishment has been charged an arm's length fee by its foreign parent). According to the Circular, "a considerable portion" of the profits derived by non-residents from international sales would be taxable by India.

This Circular led to a controversy where it was alleged that India was being overly aggressive with respect to the taxation of non-resident firms. As a result, the Circular was withdrawn and replaced with another Circular. The new Circular simply restates the provisions of profit attribution and transfer pricing found within Indian tax treaties. Indian tax authorities appear to be suggesting that traditional tax

rules will determine the appropriate tax treatment: "in determining the profits attributable to an IT enabled BPO unit constituting a Permanent Establishment, it will be necessary to determine the price of the services rendered by the Permanent Establishment to the Head Office … on the basis of "arm's length principle." The arm's length price in turn is determined by reference to Indian domestic tax law. The key area of contention appears to be the appropriate quantum of profit attribution to Indian-based BPOs.

16.8 Summary

The OECD took a lead role at promoting guiding principles to tackle these challenges then developed consensus-promoting processes to move the reform efforts forward. The success of these efforts likely pre-empted national legislative and administrative actions as governments, as revealed by the survey within this paper, were generally content to abide by the OECD views.

The OECD has for many years been examining a number of issues directly related to cross-border consumer transactions, including ways to build trust and confidence on-line and to overcome existing barriers to a truly global marketplace.

As evidenced by the e-commerce reform initiatives which involved unprecedented global tax cooperation, the OECD is increasingly acting as an informal (lower case) world tax organization in contrast to the sometimes touted need for a formal (upper case) World Tax Organization that could impose binding tax rules on participating nations. In a world where governments jealously protect their tax sovereignty, the OECD reform process, which emphasizes multilateral deliberation and consensus-building through "soft institutions," may be the best available option for the development of international tax policy that promotes international welfare while permitting nations to continue to pass tax laws in their perceived national self-interest.

16.9 Self-Assessment Test

1. What are the functions of OECD?
2. Discuss the role of OECD in development of e-commerce.
3. What is meant by Permanent Establishment?

4. Explain the OECD Guidelines for Consumer Protection in the Context of Electronic Commerce.
5. Discuss the impact of OECD initiatives in Indian tax system.

16.10 Suggested Readings

- Gurram Ramachandra Rao, "India: Concept of Permanent Establishment and Electronic Commerce"
- David Rooney, "E-commerce and taxation: a virtual reality"
- Kirti and Namrata Agrawal, "Impact of E-commerce on Taxation"
- Arthur J. Cockfield, "The Rise of the OECD as Informal 'World Tax Organization' through National Responses to E-commerce Tax Challenges"
- S.R. Dinodia & Co, "E-Commerce International Approach"

Unit- 17
Benefits of E-Commerce

Objectives:

After going through this Unit you should be able to understand:

- Benefits of E-Commerce
- Limitations of E-commerce

Structure:

17.1 Introduction
17.1 Benefits of E-Commerce
17.3 Limitations of E-commerce
17.4 Summary
17.5 Self-Assessment Test
17.6 Suggested Readings

17.1 Introduction

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.

17.2 Benefits of E-Commerce

The Benefits of E-Commerce can be grouped into following categories which are:

Benefits to Organizations

The benefits to organizations are as follows:

- **International markets penetration facilities-** Electronic commerce expands the market place to national and international market with minimal capital outlay, a company can easily and quickly locate more customers, the best suppliers, and the most suitable business partners worldwide.
- **The decrease of the functioning costs**- 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.
- Electronic commerce has 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.
- **The possibility of the small companies to compete with the large companies-** Due to small expenses incurred by a virtual shop small companies are confronting with one less barrier in penetrating the markets already dominated by the large companies.
- **New possibilities for performing a direct marketing (one-to-one)-** Comparing with a human being the computer may retain not only the name and personal data of all customers as well as their preferences being capable to adapt the offer and products presentation according to each customer's profile. The study of the customers on internet may be achieved using all available data such as: location, type of browser and operation system, the site where they do come from navigation habits but the customers will not realize at all that they are subject of such studies.
- 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.
- The pull-type processing enables expensive customization of products and services which provides competitive advantage to its implementers.
- Electronic commerce reduces the time between the outlay of capital and the receipt of products and services.

- Electronic commerce initiates business processes reengineering projects by changing processes, productivity of salespeople, knowledge workers, and administrators can increase by 100 percent or more.
- Electronic commerce lowers telecommunication cost the internet is much cheaper than value added networks.
- E-commerce lower telecommunications cost. The Internet is much cheaper than Value Added Networks (VANs) which were based on leasing telephone lines for the sole use of the organization and its authorized partners. It is also cheaper to send a fax or e-mail via the Internet than direct dialing.
- Digitization of products and processes- Particularly in the case of software and music/video products, which can be downloaded or e-mailed directly to customers via the Internet in digital or electronic format.
- Businesses can be contacted by or contact customers or suppliers at any time.
- 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:

- Enables customers to shop or conduct other transactions 24 hours a day, all year round from almost any location. For example, checking balances, making payments, obtaining travel and other information.
- Electronic commerce provides customer with more choices; they can select from many vendors. Customers not only have a whole range of products that they can choose from and customise, but also an international selection of suppliers.
- Electronic commerce frequently provides customers with less expensive products and services by allowing them to shop in many places and conduct quick comparisons.
- In some cases, especially with digitized products, E-Commerce allows quick delivery.

- Customers can receive relevant and detailed information in seconds, rather than days or weeks.
- Electronic commerce makes it possible to participate ate in virtual auctions.
- Electronic commerce allows customers to interact with other customers in electronic communities and exchange ideas as well as compare experiences.
- E-commerce facilitates competition. An environment of competition where substantial discounts can be found or value added, as different retailers vie for customers. It also allows many individual customers to aggregate their orders together into a single order presented to wholesalers or manufacturers and obtain a more competitive price (aggregate buying).
- Consumers get improved delivery processes. This can range from the immediate delivery of digitized or electronic goods such as software or audio-visual files by downloading via the Internet, to the on-line tracking of the progress of packages being delivered by mail or courier.
- The apparition of the electronic commerce gave a new meaning of the term 'globalization'. For example in order to buy handcrafted items from Madagascar it is not necessary to travel to that destination but only to open the browser at the address of a shop that is trading such items (address that can be found using the searching motors). Before buying the product the potential future buyer has more free and cheap access to the offers of the producers or trading companies.
- **Transparency in pricing-** Among the more evident benefits of e-markets is the increase in price transparency. The gathering of a large number of buyers and sellers in a single e-market reveals market price information and transaction processing to participants. The Internet allows for the publication of information on a single purchase or transaction, making the information readily accessible and available to all members of the e-market.

Benefits to Society

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

- 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.

- Electronic commerce allows some merchandise to be sold at lowest prices, so less affluent people can buy more and increase their standard of living.
- Electronic commerce enables people in third world countries and rural areas to enjoy products and services that otherwise are not available to them.
- 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.
- Enables more flexible working practices, which enhances the quality of life for a whole host of people in society enabling them to work from home. Not only is this more convenient and provides happier and less stressful working environments, it also potentially reduces environmental pollution as fewer people have to travel to work regularly.
- Enables people in developing countries and rural areas to enjoy and access products, services, information and other people which otherwise would not be so easily available to them.
- E-commerce facilitates delivery of public services. For example, health services available over the Internet (on-line consultation with doctors or nurses), filing taxes over the Internet through the Inland Revenue website.

17.3 Limitations of E-commerce

There was much hype surrounding the Internet and e-commerce over the last few years of the twentieth century. Much of it promoted the Internet and e-commerce as the panacea for all ills, which raises the question, are there any limitations of e-commerce and the Internet? Isaac Newton's 3rd Law of Motion, 'For every action there is an equal and opposite reaction' suggests that for all the benefits there are limitations to e-commerce. The limitations of E-Commerce can be grouped into following categories:-

1. Limitations of e-commerce to organizations

- **Lack of sufficient system security, reliability, standards and communication protocols-** There are numerous reports of websites and databases being hacked into, and security holes in software. For example, Microsoft has over the years

issued many security notices and 'patches' for their software. Several banking and other business websites, including Barclays Bank, and even the Consumers' Association in the UK, have experienced breaches in security where 'a technical oversight' or 'a fault in its systems' led to confidential client information becoming available to all.

- **Problems with compatibility of older and 'newer' technology-** There are problems where older business systems cannot communicate with web based and Internet infrastructures, leading to some organizations running almost two independent systems where data cannot be shared. This often leads to having to invest in new systems or an infrastructure, which bridges the different systems. In both cases this is both financially costly as well as disruptive to the efficient running of organizations.
- **The Fraud-** As in any other activity field, the technology of internet created new fraudulent possibilities. In the lack of a direct contact a client may cheat the trader regarding his identity or his real payment possibilities. Most of the occidental virtual shops hesitate to send commodities to East Europe because of the many successful embezzlement trials initiated by East Europeans with false credit cards.
- Rapidly evolving and changing technology, so there is always a feeling of trying to 'catch up' and not be left behind.
- Under pressure to innovate and develop business models to exploit the new opportunities which sometimes leads to strategies detrimental to the organization. The ease with which business models can be copied and emulated over the Internet increases that pressure and curtails longer-term competitive advantage.
- Facing increased competition from both national and international competitors often leads to price wars and subsequent unsustainable losses for the organization.

2. Limitations of e-commerce to consumers

- **Lack of security and privacy of personal data-** There is no real control of data that is collected over the Web or Internet. Data protection laws are not universal and so websites hosted in different countries may or may not have laws which protect privacy of personal data.

- **Physical contact and relationships are replaced by electronic processes-** Customers are unable to touch and feel goods being sold on-line or gauge voices and reactions of human beings.
- Computing equipment is needed for individuals to participate in the new 'digital' economy, which means an initial capital cost to customers. A basic technical knowledge is required of both computing equipment and navigation of the Internet and the World Wide Web.
- Cost of access to the Internet, whether dial-up or broadband tariffs. Cost of computing equipment. Not just the initial cost of buying equipment but making sure that the technology is updated regularly to be compatible with the changing requirement of the Internet, websites and applications.
- A lack of trust because they are interacting with faceless computers.

3. Limitations of e-commerce to society

- **Breakdown in human interaction-** As people become more used to interacting electronically there could be an erosion of personal and social skills which might eventually be detrimental to the world we live in where people are more comfortable interacting with a screen than face to face.
- **Social division-** There is a potential danger that there will be an increase in the social divide between technical haves and have-nots – so people who do not have technical skills become unable to secure better-paid jobs and could form an underclass with potentially dangerous implications for social stability.
- **Wasted resources-** As new technology dates quickly how to dispose of all the old computers, keyboards, monitors, speakers and other hardware or software?
- **Facilitates Just-In-Time manufacturing-** This could potentially cripple an economy in times of crisis as stocks are kept to a minimum and delivery patterns are based on pre-set levels of stock which last for days rather than Weeks.
- Reliance on telecommunications infrastructure, power and IT skills, which in developing countries nullifies the benefits when power, advanced telecommunications infrastructures and IT skills are unavailable or scarce or underdeveloped.

- Difficulty in policing the Internet, which means that numerous crimes can be perpetrated and often go undetected. There is also an unpleasant rise in the availability and access of obscene material and ease with which pedophiles and others can entrap children by masquerading in chat rooms.

4. Technical Limitations of E-commerce

The technical limitations of E-Commerce are as follows:

- There is a lack of s stem security, reliability, standards and communication protocols.
- There is insufficient telecommunication bandwidth.
- The software e development tools are still evolving and changing rapidly.
- It is difficult to integrate the Internet and E-Commerce software with some existing applications and databases.
- Vendors may need special Web servers and other infrastructures in addition to the network servers.
- Some E-Commerce software might not fit with some hardware or may be incompatible with some operating systems or other components.
- As time passes, these limitations will lessen or be overcome; appropriate planning can minimize their impact.

5. Non-technical Limitations of E-commerce

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

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.

The single most important challenge today pertains to increasing awareness of the benefits of e-commerce to potential customers, educate the market and the customers will themselves opt for these services. So, the e-commerce fraternity should accept the fact that the customers are extremely demanding and that they should be geared up towards this end and surpass the expectations of customers. .

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.

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.

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.

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-trailers 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:

- There is no fixed physical location for the internet.
- It is difficult to monitor or prevent transmissions of information or electronic cash across the Net.
- Neither the users, administrators nor intermediaries have any control on the type of information, either transactions or cyber cash and traveling through their networks.

- 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.
- 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.
- 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.
- In addition to technology problems, certain legal hurdles may also be encountered with reference to international taxation laws.
- The difficulties in defining service incomes as distinguished from sale of products, income or royalties cannot be ignored.

17.4 Summary

E-commerce can be categorized according to the parties involved in the business like B2B, B2C, C2C and C2B. The benefits of e-commerce to organizations include expansion of the marketplace to national and international markets, decreases in the cost of creating, processing, distributing, storing, and retrieving paper-based information, reduction in inventories. E-commerce enables customers to shop or do other transactions 24 hours a day and provides customers with more choices. 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. Limitations of e-commerce can be technical like lack of system security, reliability, standards, and some communication protocols and non technical limitations like the cost involve in developing in house e-commerce and the security of data.

17.5 Self-Assessment Test

1. State the e-commerce benefits to organizations.
2. What are the benefits of E-Commerce to consumers?

3. Discuss the limitations of e-commerce to society.
4. What are the technical limitations of e-commerce?

17.6 Suggested Readings

- Niranjanamurthy M, Kavyashree N, Mr S.Jagannath and Dr. Dharmendra Chahar, "Analysis of E-Commerce and M-Commerce: Advantages, Limitations and Security Issues"
- Anjali Gupta, "E-commerce: Role of E-Commerce in Today's Business"
- Prof. Dr. Petra Schubert, "Sustainable Competitive Advantage in E-Commerce and the Role of the Enterprise System"
- Dr. Nicodim Liliana, "Advantages and Disadvantages of the Electronic Commerce"

Unit-18
Consumer Protection in Cyber Space

Objectives:

After going through this Unit you should be able to understand:

- Meaning of online consumer and their rights
- Various measures for the Protection of online consumer
- Fair dispute resolution

Structure:

18.1 Introduction
18.2 E-Commerce and its Impact on Consumers
18.3 Need of E-Consumer Protection
18.4 Measures for the Protection of E-consumer
18.5 Fair Contracts
18.6 Fair Dispute Resolution
18.7 Summary
18.8 Self-Assessment Test
18.9 Suggested Readings

18.1 Introduction

Unlike the offline environment, where consumers enter a store, inspect potential purchases and judge for themselves the trustworthiness of a seller, the online world does not provide the same opportunity to use a "buyer's instinct." Rather, many consumers are forced to proceed on faith, knowing precious little about the seller to whom they are entrusting their credit card data.

The consumer movement in India has received an impetus with the enactment of the Consumer Protection Act of 1986. The definition of "unfair trade practice" in the Consumer Protection Act ensures comprehensive disclosures about a number of criteria. One lacunae of the Act is that it does not adequately address the issue of unfair terms in a contract. Sometimes the consumer is also not sure

whether he has all the information needed to make an informed choice. This problem is most acute when a consumer purchases financial services over the Net. Keeping this in mind, the EU has come up with a proposal for developing a regulatory framework for distance selling of financial services

18.2 E-Commerce and its Impact on Consumers

E-Commerce involves conducting business activities using electronic data transmission involving computers, telecommunications networks, and streamlined work processes. Business-to-business (B2B) e-commerce is a form of e-commerce in which participants are organizations. The business-to-consumer (B2C) e-commerce is a form of e-commerce in which customers deal directly with organization, avoiding any intermediaries. Worldwide, businesses and individuals use e-commerce to reduce transaction costs, speed the flow of goods and information, improve the level of customer service, and enable close coordination of activities among manufacturers, suppliers, and customers. E-commerce also enables consumers and companies to gain access to worldwide markets.

The citizens in developing countries face a number of challenges in harnessing the benefits in the area of e-commerce. If e-commerce is to succeed in raising incomes and trade flows in the developing world, a range of technical, legal, and international governance considerations need to be addressed. Thus, developing countries need to focus their efforts in two areas beyond access: capacity building, and international governance.

A. Capacity Building

In addition to communications infrastructure, successful e-commerce relies on a variety of other public sector inputs. Legal systems must adapt to a new range of contract and liability issues, educational systems must produce a technically competent work force, and banks must be able to accept electronic payments. These factors are critical components for successful e-commerce development.

E-commerce requires a supportive legal framework in the banking and industrial sectors, as well as legal and juridical changes in response to challenges that have emerged in tandem with the new technologies. These include standards and protection of digital signatures, the liability of value-added networks, regulation of certification authority, protection of intellectual property, and

computer crime and data protection. The complexity of these issues is a major obstacle for countries that lack the technical capacity to design and implement needed reforms. In response, the United Nations Commission on International Trade Law (UNCITRAL) has developed a standardized e-commerce "model law" designed to be easily integrated into most country's legal systems. The law is based on developing equivalencies for paper-based concepts such as 'writing,' 'signature,' and 'original.' In addition, the model law provides specific guidance for the design of regulations involving legal coverage of electronic communication and the transmission of goods and services via the Internet. Regional institutions have also sought to assist countries in the design and implementation of legal and regulatory frameworks for governing e-commerce.

A second major capacity issue involves human resource development and specialized technical skills. E-commerce is computer and network intensive, requiring skilled programmers and applications-development personnel. Furthermore, as the majority of Internet content and programming languages are English-based, intensive language training is necessary. In addition, for B2C e-commerce and government services online to succeed, consumers also require both basic literacy and computer skills.

Finally, the financial systems in many countries require significant upgrading and regulatory changes in order to meet the demands of e-commerce. Business and consumer trust in electronic forms of payment need to be enhanced through effective supervision and technical capacity. In particular, national banking systems will need to upgrade their infrastructure to accommodate electronic payments and settlements. In addition, due to cultural constraints, inadequate financial infrastructure, and low incomes, most countries lack a critical mass of credit-card equipped consumers who can buy goods over the Internet. As electronic forms of payment are critical for B2C e-commerce, improvements in either credit-card penetration or other forms of on-line cash will need to be developed.

b. International Coordination

The cross-border effects of e-commerce require international coordination in order to avoid unilateral actions that could stifle trade and lead to uncompetitive practices. In this regard, the developed countries have already driven the negotiating agenda, and the developing countries are in the process of raising their

concerns in the WTO and UNCTAD. Part of the problem centers on the speed with which e-commerce has turned into a major trade issue. Many developing countries are yet to be equipped to handle the technical components and trade implications of continued e-commerce growth.

First, the digital transmission of goods and services will render traditional customs procedures and domestic taxation systems archaic and/or obsolete. Through work in the OECD, the United States and Europe have adopted the position that cross border e-commerce flows should be entirely market-driven and have proposed a moratorium on e-commerce taxes. Ignoring for the moment the issue of how to collect taxes on digital goods and services (i.e. whether authorities are even aware that the transaction is taking place), countries must consider the revenue implications of tax-free transactions if e-commerce reaches the order of magnitude that many analysts predict.

Second, e-commerce makes it increasingly difficult for countries to distinguish between goods and services. WTO rules approach trade in goods and services differently; Goods are generally subject to tariffs while trade in services is limited by restrictions on national treatment and/or quantitative controls regarding market-access. As a result, several important WTO rules, particularly the General Agreement on Trade in Services, which emerged from the Uruguay Round, may already be in need of reconsideration and negotiation.

Third, the digitization of information, combined with ability to make it available to a mass audience at small marginal cost, has raised concerns that global trade rules do not protect information producer's rights to own and profit from their work. As a result, many countries are seeking to discuss the impact of electronic commerce on the areas of copyright and related rights, trademarks, patents, domain names and unfair competition within the framework of the WTO's Trade in Intellectual Property (TRIPs) agreement. Differences have emerged, however, over balancing the needs of information and content providers with ensuring equal access to new technologies and methods. Stronger rules on TRIPs could potentially reduce developing country access to new tools and technologies.

Developing countries will have to be prepared to respond to these threats through greater participation in international fora abroad and reform and technical training at home. Further, as has been mentioned, it is likely that the networking revolution will create losers as well as winners, this greatly increases the

importance of safety nets for individual workers and programs supporting structural change and re-engineering at the company and sector level.

18.3 Need of E-Consumer Protection

Number of e-consumer is growing like nothing these days due to its user-friendly nature but at the same time the risk factors for using internet for e-shopping is also increasing and about to catch danger mark if not restricted and regulated properly by a time bound regulation on the same. Numerous reasons are there for the protection of e-consumer like creations of hackers duplicate account, disclosure of private information without consent, masking, caching etc. but few problems make the protective measure indispensible in this respect and required speediest protective mechanism. It ranges from rules for opening bank accounts to standards for the manufacture and safety of goods. Government, from the local trading standards office to the regulators of the stock market and banks, ensure that these regulations are applied, and provide complaint procedures when things go wrong. Few of these are discussed below:

1. Phishing

Online identity theft of the consumer has long been an epidemic. An official definition of online identity theft is the practice of pretending to be someone else on the internet. The purpose can be quite harmless (like ordering to some product to someone under someone else's account), but when referred to in the media, it"s often about the criminal activity of stealing someone's personal information for his or her own financial gain. More often than not, it involves phishing (online fraud) for a person's banking information and using that to order goods or transfer money to another bank account. There is a framework of legal regulations designed to provide protection as a consumer in physical or traditional modes means when shopping from a local shop. But, at present there is no similar framework that covers all situations where one purchase goods on Internet by electronic transactions. In India though the Government has promoted e-commerce aggressively which is indirectly a promotion to e-consumers activities, focusing especially on the delivery of services and legal controls for the online sale of goods have yet to catch up with those for conventional shopping.

2. Insecurity

Another important factor is lack of guidelines for buying online with a degree of safety. It is important to realize that all computer systems cannot be one hundred percent secure, there is always a degree of risk involved in using the Internet for buying goods. Thus, it requires a strict and user-friendly law which should not only provides the security at the time of shopping but also protect the interest of the e-consumer for post transactional consequences.

3. Online Jurisdiction

Third factor is that the Internet is a communications medium without geographical or national boundaries. By contrast, consumer protection legislation is based within national and local boundaries. To be protected by law under the present laws in India at the time of electronic shopping, the first thing an e-consumer need to be ensured is that all the parties involved in the transactions are based within national boundaries where his municipal consumer protection laws apply; in other words, that the organizations one is dealing with must come under the same legal jurisdiction as they do which is not possible in the process of e-shopping on internet because in internet the jurisdiction is borderless.

18.4 Measures for the Protection of e-consumer

The following areas of central importance for the effective protection of e-consumers:

a. Apposite Information:

It has been said that an informed consumer is the asset of the nation and considerably better equipped to look after her/his own interests than is an uninformed consumer. Businesses must be required to make all relevant information available that can help the consumers to assess the benefits and risks of entering into a particular transaction. Having access to such information equips the consumer to decide whether to contract or not, and ensures that the consumer knows what to expect. Hence unnecessary disappointments, with subsequent disputes, are avoided. E-consumers are particularly dependent on appropriate information being provided, because such information acts as a substitute for the real-life „touch-and-feel" that occurs during offline transactions. In addition, e-commerce is a particularly suitable transaction form for the supply of information. While it would be virtually impossible to provide signage or printed information

materials outlining the specifications of all items sold in physical shops, it is easy for an e-retailer to include links to detailed information about the products it sells. Thus, legal regulation requiring e-retailers to provide detailed information about their products, the sales process, etc. is not particularly onerous for the e-retailers. The type of information that e-retailers should be required to provide can be broken down into six categories; information about the e-retailer, information about the product, information about the sales process, information about the terms of the contract, information about how the consumer's personal data will be dealt with and information about applicable dispute resolution processes.

b. Information about the E-Retailer:

The Internet is a particularly suitable communications medium for those seeking to engage in fraud- a web shop with a professional look can be created in a couple of hours, it can be operated at distance and can be moved, and removed, as suits the needs of the criminal. Consequently, consumers need information that allows them to assess the reliability of the e-retailer. E-consumer protective regulation must require e-retailers to provide, at least the information regarding the e-retailer's identity, the e-retailer's place of registration, the e-retailer's physical location, and the e-retailer's contact details including physical address, postal address, e-mail address and telephone number.

c. Information about the Product:

Perhaps the most obvious type of information needed by a consumer is such information that allows the consumer to assess the characteristics, quality and price of the product. E-consumer protection regulation must consequently require e-retailers to provide, at least, information regarding an accurate, and appropriately detailed, description of the product, its characteristics, uses, limitations, compatibility, as well as the need for services and maintenance, the full price of the product, including applicable taxes and surcharges (such as delivery costs); all costs itemized, the applicable currency, applicable warranties and guarantees, any applicable after-sales service provided by the seller, manufacturer or a third party, and safety-related information.

d. Information about the Sales Process:

E-retailers have worked hard to ensure a streamlined sales process, making it as easy as possible for consumers to place their orders. However, the simplicity

of the ordering process is typically coupled with complex terms and conditions governing the transaction. In other words, while it may be very easy to order a particular product, it may be very difficult for a consumer to understand the rules governing the sales process. It is consequently important that e-consumer protection regulation requires e-retailers to provide, the information about the sales process, at least, about the technical steps to be followed in order to conclude a contract; about any constraints placed on the sale; about the expected delivery time and method; about any applicable order tracking system in place; about the payment process; about the parties' rights to cancel, terminate or retract, as well as applicable refund, exchange and returns possibilities; about what will appear on credit card statements in case of sale by credit card; and about the security measures applied to the transaction. Furthermore, e-retailers must be required to ensure that any commercial communication (e.g. e-mail or website) is clearly identified as being of a commercial nature.

e. Information about the Terms of the Contract:

It has been seen that that few consumers ever take the time to read the terms and conditions they agree when entering into contracts online. For example, in one study it shows that 90% of the respondents indicated that they never read the whole agreement, while at the same time 64% indicated that they always click “I agree”. Furthermore, 55% did not believe that they entered into a legally binding contract when clicking “I agree”. However that should not be seen as an indication that e-retailers need not provide their consumers with information about the terms and conditions of the contract. Instead, the fact that few consumers ever take the time to read the terms and conditions they agree to highlights that: (1) businesses, including e-retailers, must be required to provide easily accessible information about the terms and conditions they stipulate in their contracts, and (2) the law must be structured to meet the consumer’s legitimate expectations of protection. Any jurisdiction aiming at providing useful consumer protection regulation must insist on e-retailers providing their consumers with, at least, the terms of the contract expressed in clear, unambiguous and simple language; information of any avenues for negotiating the terms of the contract; and technical facilities for the safekeeping of the terms (such as printing or downloading). It is not enough that e-retailers are required to provide the types of information listed above. Satisfactory

regulation must also demand that the information be presented in accessible language.

f. Information about the use of Consumer's Personal Data:

A consumer's personal information is a significant resource, with a commercial value. As a consequence, e-retailers typically have an incentive to collect as much personal information as they can. This creates a conflict with the consumer's privacy interest. At a minimum, e-consumer protection regulation must require e-retailers to provide existing, and potential, consumers with detailed, yet accessible, information about how it collects data; what that data will be used for; who will have access to the data; and how the data will be kept safe etc Such regulation should also require e-retailers to highlight the consumer's rights in relation to the data, such as access and correction rights. A further concern arises relating to the lack of power of consumers to negotiate terms, and the risk that e-retailers generally will make the sacrifice of privacy a condition of doing business.

g. Information about Applicable Dispute Resolution Processes:

Few consumers take account of the availability of a dispute resolution process when deciding whether or not to purchase a particular product. However, consumer re-visits and customer loyalty will be greatly harmed by negative experiences, and aggrieved consumers and consumer advocacy organizations can be expected to generate critical media coverage of unfair behavior by e-retailers. Moreover, if exposed to information about the applicable dispute resolution process, consumers are better placed to assess the risks of engaging in the transaction. Consequently, e-consumer protection regulations should require e-retailers to provide information about applicable dispute resolution process, at least, limitations to the consumer's legal rights, such as lawful exclusion, or limitation, of the seller's liability; limitations to the consumer's avenues for redress, such as binding choice of forum clauses; applicable choice of law clauses; arbitration clauses; options for mediation; applicable internal complaint systems; and applicable external complaints systems etc.

h. Accuracy and Validity of Information:

In addition to requiring e-retailers to provide the above-mentioned information, consumer protection regulation should prescribe that the types of information listed above should be made available both before and after the

transaction is entered into. Furthermore, such regulation should prescribe a time limit for how long the information must be accurate. In other words, it is not sufficient that the information in question is accurate at the time a consumer visits the e-retailers website, the information must also remain valid and accurate for a reasonable period of time after the visit. For example, it is of little comfort to an aggrieved consumer that the e-retailer's contact details were valid at the time of contracting, if the e-retailer then stops using those contact details so as to avoid being contacted by the consumer.

Unless a consumer can be sure that no alterations have been made to the information provided, consumers would have to read all the information at the start of each visit to a website. However, if an e-retailer indicates the date that the information was posted, and brings attention to changes where changes are made, a consumer can assess whether she/he needs to re-read parts of the information. Consequently, it is crucial that consumer protection regulation requires the use of version numbering on all information provided by e-retailers. Further, consumer protection regulation must require old versions of information to be stored by the e-retailers in a manner that make them accessible to the consumers for future reference in case of a dispute.

i. Confirmation of the Transaction:

Consumer protection regulation should require e-retailers to provide consumers with a prompt confirmation of the transaction as soon as an order has been placed. That confirmation should contain information acknowledging that the order has been accepted, information regarding expected delivery time and method used, as well as information regarding payment and applicable cancellation rights and procedures. Furthermore, the confirmation should be printable and possible to store in electronic form (for example, e-mailed at consumer’s option or made available as a downloadable file).

18.5 Fair Contracts

It has also been seen that few consumers ever take the time to read the terms and conditions they agree to when entering into contracts online. There are several reasons for this. First of all, some consumers simply do not think that the terms and conditions are legally binding. Second, most consumers are poorly

equipped to understand the significance of the terms of the contracts they enter into. Consciously or subconsciously, they rely upon the legal system to protect them from unfair contractual clauses. They take a more or less calculated risk, hoping to be treated fairly by the law. If this is true, it could be argued that consumer protection laws have created lazy and irresponsible consumers who do not take the time to seek to protect their interests. Further, many standard contracts contain complex legal clauses, such as choice of forum clauses and exclusion clauses, that even legally trained people may struggle to fully comprehend. As a result, consumers in general do not read the terms and conditions of the contracts they enter into. Different features have been discussed here under which any useful consumer protection regulation must possess. These features can be divided into two categories: features relating to the regulation of contract formation and features relating to the regulation of the terms of the contract. However, there is some degree of overlap between these two categories of features, such as the need for an adequate regulation of unconscionable conduct.

Adequate Regulation of Unconscionable Conduct

Unconscionable conduct comes in many forms. For example, it is unconscionable for an e-retailer to put undue pressure on a consumer. It is also unconscionable for an e-retailer to take advantage of a consumer's mistake or other weakness. Satisfactory consumer protection regulations must adequately protect consumers against such unconscionable conduct. The following are some examples of unconscionable conduct that are typical, or particularly relevant, for the e-commerce context:

- Useful consumer protection regulation ensures that e-retailers cannot use sales processes that confuse consumers into entering into an agreement or appearing to accept unreasonable terms. All sales processes should contain a step at which the consumer is asked to verify the purchase, and at that step, the consumer should have access to an easy mechanism for correcting or cancelling the order;
- The impossibility of knowing who you contract with places a particular onus on e-retailers to avoid contracting with consumers who lack, or have limited, legal capacity. Consumer protection regulation should contain special rules protecting consumers who lack, or have limited, legal capacity, such as children and mentally ill, and their guardians;

- Unconscionability rules must also prevent e-retailers from holding a consumer liable for purchases not authorized by the consumer. For example, an e-retailer should not be allowed to seek payment from a consumer where the consumers" credit card has been used in an unauthorized manner; and
- E-retailers, like their offline counterparts, often include clauses in their standard contracts, giving them the right to unilaterally vary the terms of the contract. The scope of the unconscionability rules must be broad enough to ensure that such unilateral variation is not allowed.

Adequate Regulation of Product Quality and Suitability:

Consumer protections regulations must ensure that products sold meet an adequate quality and safety standards. Further, where a consumer has made clear the purpose for which a product will be used, the law must ensure that the e-retailer may only deliver products suitable for the purpose described by the consumer. Finally, products provided must correspond with any descriptions provided of the product.

1. Adequate Regulation of Liability Issues:

A contract under which the e-retailer excludes all forms of liability would rarely be fair to the consumer. Consumer protection regulations must make clear that an e-retailer may only exclude liability in specific circumstances, where a reasonable balance of risks between buyer and seller has been prescribed by law.

2 Adequate Regulations of Return, Exchange and Refund Issues:

Useful consumer protection regulation should include provisions protecting the consumer's right to return or exchange products where appropriate. Such regulations should also ensure that consumers have a right to a refund where it is reasonable to ask for one. For example, a right to refund should exist where a faulty product has had to be returned or where a payment error has occurred. It is also important that consumer protection regulation provides for an adequate „cooling off" period. In other words, such regulation must give consumers the right to return goods or cancel a service within a reasonable time of entering into the contract for that product. Where goods are returned to the seller, the cost for the return may fall on the consumer.

3 Adequate Regulations of the Rights in the Goods:

Consumer protection regulations must include adequate rules regarding the consumer's legitimate right to title in, and quiet possession of, products they purchase. Furthermore, such regulation must address at what point the risk in the product passes from the e-retailer to the consumer.

4. *In Dubio* or Undetermined Rules:

One way of ensuring that businesses take care to draft clear and accessible contracts is to implement rules stipulating that inconsistent or unclear clauses are interpreted in a manner favorable to the party that did not draft the contract. Useful consumer protection regulation must include such rules. In other ways the interpretation of the confusing / unclear / inconsistent words should be made in favor of subject i.e. for consumers.

5. Adequate Privacy Protection:

Much has already been written about what is required, by way of regulation, to ensure a sufficient level of protection of consumers" privacy. Furthermore, the work of international organizations has resulted in a certain degree of international harmonization of different countries' privacy regulation.

The starting point of any attempt at protecting e-consumer's privacy must be an aim that as little data collection as possible takes place and the data that necessarily must be collected ought to be non-personal where possible. Further, data protection schemes must ensure that where personal data is collected, the data subject is made aware of the collection, its purpose and uses, and has the right to access and correct that data. The data collector must also make sure that the data is kept safe, and is only used and disclosed for the purpose it was collected for. Finally, scheme aiming at providing useful protection of e-consumers must adequately protect e-consumers" engaging in cross-border trade and should provide particular protection for sensitive data like health related information etc.

18.6 Fair Dispute Resolution

Ensuring a fair resolution to a dispute between an e-retailer and an e-consumer requires a multi-facetted approach. The starting point must be a realization of two fundamental considerations:

(1) The combination of the small values typical of consumer e-commerce transactions and the complexities of, and costs associated with, litigation means that few consumer disputes are suitably handled by the legal system; and

(2) A consumer's right to seek redress is an important incentive to businesses to not try to avoid their responsibilities. Taking account of these two considerations, the conclusion must be that any useful consumer protection regulation ought to provide consumers with a realistic avenue for taking legal action against the seller/service provider, but with the alternative or prior step of a more appropriate dispute resolution system.

a. A Realistic Avenue for Legal Action

Sometimes, when the litigations cross the borders mostly it becomes complex and typically very costly litigation. A consumer is usually better advised to accept the loss than to take legal action against the seller. Indeed, anecdotal evidence suggests that consumers often expect to bedefrauded" in a number of online transactions, but that they consider the overall gain to outweigh the losses so caused. This is detrimental to consumers, and consumer doubts about the fairness of e-trading represents an impediment to the adoption of efficient electronic mechanisms. Hence, consumers must always have a realistic avenue for taking legal action against the seller, as the existence of such avenues puts pressure on the e-retailers to not simply ignore consumer complaints. There are two key components in ensuring that consumers have some degree of access to taking legal action against a seller:

I. To be effective, a consumer protection scheme must ensure that the consumer, in an e-commerce transaction, can take legal action at her/his place of residence or domicile. This main rule may be departed from where the consumer has actively and consciously misled the e-retailer on the matter. It may also be departed from where a consumer is located outside their country of habitual residence and, while entering into the transaction, specifically identified their actual location at the time of the transaction. In such a case, the consumer may reasonably be limited to take action at that location.

II. The consumer in an e-commerce transaction should always be allowed to rely upon the consumer protection provided by their country of residence or domicile. The

same two limitations as are discussed in the context of where the consumer can sue would also be applicable in this context.

In addition, useful consumer protection regulation will also ensure that consumers have adequate access to advice and assistance where they take legal action. Meeting this requirement will typically involve the work of a governmental department or agency working with consumer protection questions. Such a department or agency ought to have the capacity to act on consumers behalf in both local and cross-border litigation. Moreover, domestic consumer protection agencies should actively participate in international co-operation so as to maximize the chance of successfully protecting e-consumer interests in cross-border trade. Finally, taking account of the typical weakness of individual consumers, useful consumer protection regulation requires that consumers have the option of participating in class actions.

b. An Appropriate Alternative Dispute Resolution System:

In civilized countries, nowadays ADR system has been adopted by corporate houses to resolve their disputes. The ADR scheme has been willfully accepted by both consumers as well as retailers/producers. Many sectors have developed a user friendly complaint handling system under ADR scheme and adopted mature dispute resolution mechanisms that operate administratively or as tribunals, with less strict rules and lower costs than the courts. The provision for ADR system should also be encouraged by legislation protection e-consumers right. For an alternative dispute resolution mechanism to be adequate, it must be cost-effective, easy to understand, accessible, credible, timely, transparent to the parties, fair and capable of providing effective remedies. Further, a consumer must have the right to be represented, and or assisted, by a third party.

18.7 Summary

Consumer protection issues in the context of e-commerce have gained a considerable amount of attention both from academics and policy-makers. Furthermore, governments as well as inter-governmental organizations have discussed the issues involved and developed various frameworks. Some of those instruments deal with e-commerce consumer issues specifically, while others address consumer protection more generally. Despite this attention, a review of

existing legal frameworks shows that they have failed e-consumer needs. It has emerged within public policy frameworks dominated by commitments to economic progress, to freedom of corporations to do business as they choose, and to protect the interest of the consumers whose rights have been infringed p in traditional mode. It is not able to protect the consumers form infringement of their rights in electronic modes. Even those frameworks that have begun from the consumer perspective have been significantly become frozen in time due to technological advancement, or by a lack of will law making authority to make the existing law a dynamic one so that it can cover protective issues of both sots of violations of consumer rights which is really far-reaching in its present shape and provisions. In India we have lots of fragmented laws to cope up the challenges mentioned in the forgoing paragraphs apart from Consumer Protection Act, 1987. But we need a consolidated law to deal with all above mentioned situations so that the electronic consumer's right can be protected properly.

18.8 Self-Assessment Test

1. What do you mean by consumer? Discuss the impact of e-commerce on consumer.
2. What is consumer protection? State the measures for the protection of e-consumer.
3. What do you understand by Fair Contracts?
4. Discuss the Need of E-Consumer Protection.

18.9 Suggested Readings

- John Rothchild, "Protecting the Digital Consumer: The Limits of Cyberspace Utopianism"
- Professor Michael Geist, "A Guide to Global E-commerce Law"
- Rowley Jennifer, "E-business: Principles & Practice"
- Amit M. Sachdeva, "International Jurisdiction in Cyberspace: A Comparative Perspective"
- Neelabh Rai, "Consumer Privacy in Cyberspace"
- Chetan Karnatak, "Cyberspace: Jurisdictional Issues of E-Commerce and Consumer Protection"

- Prof. T.P. Rama Rao, “E-Commerce and Digital Divide: Impact on Consumers”
- Dr. Shashi Nath Mandal, “Protection of E-Consumer’s Rights in Electronic Transaction”