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# Chapter 1 E-Commerce and E-Commerce Law

## Learning Outcomes

- Concept of E-Commerce
- Development of E-Commerce

## Difficulties

- Characteristics of E-Commerce
- Legal System of E-Commerce

## Requirements

You should grasp the following content accomplished

- Concept of E-Commerce
- Characteristics of E-Commerce
- Legal System of E-Commerce

You should understand the following content

- Countries Legislation of E-Commerce

Today, electronic commerce are exploding: business everywhere are creating Web presences and reaching their markets in ways that were never before possible. In the last decade, the Internet and World Wide Web have changed the way people communicate, conduct business and manage their daily lives. This chapter is designed to overview Electronic Commerce and outline the working of the legal system. Legislation status on electronic commerce in some countries and international society are introduced in this part. After learning this part, students can recognize national and international legal systems on electronic commerce and their potential impact on electronic commerce.

‘Electronic commerce’ is often shortened to ‘E-Commerce’. The prefix ‘e’ is increasingly added to any relevant word to relate its application to the new electronic domain. Thus, we see words like ‘e-mail’, ‘e-book’, ‘e-business’ ‘e-trader’ ‘e-buyer’ ‘e-consumer’, and so on. To understand the E-Commerce phenomenon, we need to begin by identifying what we mean by E-Commerce. This clarification will lead us to consider the development of the Internet and World Wide Web.

## 1.1 Overview of Electronic Commerce

### 1.1.1 Origin and Development of Electronic Commerce

As we enter the new century, we experienced one of the most important changes in our lives—the move to an Internet-based society. Almost everything is changed at home, in school, at work, in the government—even in our leisure activities. Computer and Internet are spreading around the globe. one of the most significant changes is in the manner we conduct business—Electronic Commerce came out.

E-Commerce applications were first developed in the early 1970s with innovations such as electronic fund transfers(EFT). However, the extent of the applications was limited to large corporations, financial institutions, and a few daring small businesses. Then came electronic data interchange, known as EDI, which expanded from financial transactions to other types of transaction processing, thus enlarging the pool of participating companies from financial institutions to manufacturers, retailers, services, and many other types of businesses. More new EC applications followed, ranging from stock trading to travel reservation systems.

As the Internet became more commercialized and users flocked to participate in the World Wide Web in the 1990s, the term electronic commerce was coined and EC applications rapidly expanded. One reason for the rapid expansion of E-Commerce was the development of new networks, protocols, software, and specifications. The other reason was the increase in competition and other business pressures.

Since 1995, Internet users have witnessed the development of many innovative applications ranging from interactive advertisements to virtual reality experiences. Almost every medium—and large-sized organization in the world now has a web site, and most large corporations have comprehensive portals. Many of these sites contain tens of thousand of pages and links. In 1999, the emphasis of EC shifted from B2C to B2B. Also, consolidation is now taking place.

At the same time EC could contribute significantly to the development of harmonious international economic relations, As stated in <E-Commerce and Development Report> by United Nations Conference on Trade and Development: Few manifestations of the power of human creativity have so extensively and so quickly transformed society as the rise of the Internet and other information and communication technologies (ICT) over the past decade. Dramatic as the changes may be, the process of assimilating and learning from them has only just begun.

ICT can improve education, health, governance and trade. They are dramatically changing social and economic relationships and interactions, giving people, businesses and governments the tools with which to devise more productive, more inclusive and more development-friendly societies and economies. As UNCTAD's E-Commerce and Development Report 2003 shows,

there is now growing agreement about the positive contribution of ICT to productivity growth. Through the application of ICT firms will become more competitive, new markets will be accessed and new employment opportunities created. All of this will result in the generation of wealth and sustainable economic growth.

The report observes that revolutionary visions of the Internet's role in the economy, as well as the disappointment that followed their failure to become a reality, are giving way to a more nuanced but strongly positive assessment of the Internet's impact on business performance. Many of the promised economic benefits of the Internet seem to be materializing. Noting this, enterprises are preparing for e-business: while overall investment in IT has decreased by 6.2 per cent since 2001, e-business budgets are estimated to have risen by as much as 11 per cent in 2002. In 2003 annual growth in e-business investment fell to 4 per cent, but this rate was twice as fast as the growth in overall IT investment.

The report shows that the number of Internet users in the world reached 591 million in 2002, although the annual rate of growth slowed to 20 per cent. At the end of 2002, developing countries had 32 per cent of the world's Internet users, while North America and Europe accounted for as many as 89 per cent of the world's Internet hosts. The average African Internet user still enjoys about 20 times less bandwidth capacity than the average European user, and 8.4 times less than a North American one. Even if e-readiness in developing countries is lower than in the high-income regions of the world, a number of relatively advanced ICT adopters have been identified in all regions of the world, and no developing country seems to have regressed in its integration into the digital economy. Public policies that support the extension of the information society are among the factors explaining the relative advantage enjoyed by early ICT adopters among the developing countries. Meanwhile, the majority of developing countries face limitations on the development of their e-economy stemming largely from low income levels, low literacy rates, lack of payment systems that can support online transactions, and cultural resistance to online trade.

The report notes that almost all official estimates of E-Commerce activity refer to the high-income market economies. Quoting data from surveys compiled by the Organization for Economic Co-operation and Development (OECD) concerning its member countries for 2000-2001, the report says that the share of Internet users buying online was highest in the Nordic countries, the United Kingdom and the United States, where 38 per cent of users had made purchases online; it was lowest in Mexico, where fewer than 0.6 per cent had done so. The share of sales to households in total Internet sales ranged from a maximum of about 30 per cent (Finland and Luxembourg) to a minimum of about 1 per cent (Singapore). Internet retail sales remain a small part of total retail figures (around 1.5 per cent in the United States and the European Union), although many more consumers use the Internet to research purchases that they later make in stores. Estimates of total online retail sales for 2002 were \$43.47 billion for

the United States (\$73 billion including travel), \$28.29 billion for the European Union, \$15 billion for the Asia-Pacific region, \$2.3 for Latin America and as little as \$4 million for Africa.

As regards business-to-business (B2B) E-Commerce transactions, official US statistics show the dominance of B2B transactions in the total of E-Commerce. In 2001, annual B2B online sales in the United States amounted to \$995 billion, or 93.3 per cent of all US E-Commerce. Private-sector estimates of the value of B2B trade in the European Union put it at between nearly \$185 billion and \$200 billion for the year 2002. In Central and Eastern Europe, some projections show that B2B E-Commerce will amount to around \$4 billion in 2003. In the Asia-Pacific region, it should grow rapidly, from about \$120 billion in 2002 to around \$200 billion in 2003 and \$300 billion by 2004. In Latin America \$6.5 billion worth of online B2B transactions are forecast for 2002 and \$12.5 billion for 2003, although far more optimistic estimates are also available. According to 2001 forecasts, African B2B E-Commerce in 2002 was expected to amount to \$0.5 billion in 2002 and \$0.9 billion in 2003, with South Africa accounting for 80 to 85 per cent of these amounts.

### 1.1.2 What is E-Commerce

Definitions of electronic commerce vary considerably, but generally, electronic commerce refers to all forms of commercial transactions involving organizations and individuals that are based upon the processing and transmission of digitized data, including text, sound, and visual images. It also refers to the effects that the electronic exchange of commercial information may have on the institutions and processes that support and govern commercial activities. These include organizational management, commercial negotiations and contracts, legal and regulatory frameworks, financial settlement arrangements, and taxation, among many others. The goal of electronic commerce is the creation of a new kind of commercial environment in an electronic milieu, in which many of the separate “steps” that normally intervene between a buyer and a seller in a commercial transaction can be integrated and automated electronically, thus minimizing transaction costs.

In simple words, Electronic Commerce, or E-Commerce, is buying and selling on-line. Though there exists no widely accepted definition for electronic commerce, in general, E-Commerce can be defined as any transaction that involves an on-line commitment to purchase or to sell a good or service. Defined by WTO, the term “electronic commerce” is understood to mean the production, distribution, marketing, sale or delivery of goods and services by electronic means. The term “commercial” in UNCITRAL <Model Law on Electronic Commerce> should be given a wide interpretation so as to cover matters arising from all relationships of a commercial nature, whether contractual or not. Relationships of a commercial nature include, but are not limited to, the following transactions: any trade transaction for the supply or exchange of goods or services; distribution agreement; commercial representation or agency; factoring;

leasing; construction of works; consulting; engineering; licensing; investment; financing; banking; insurance; exploitation agreement or concession; joint venture and other forms of industrial or business cooperation; carriage of goods or passengers by air, sea, rail or road.

Another classification of electronic commerce include business-to-business electronic transactions, business-to-consumer transactions, and business-to-consumer where the transaction includes an electronic payment of some kind.

The term E-business is usually applied in a broader sense. It includes buying and selling on-line, but also other aspects of on-line business activity, such as purchasing, managing production and handling logistics, customer support services, supply chain management and collaborative engineering. In this book, we mean 'E-Commerce'.

### 1.1.3 Characteristics of E-Commerce

Electronic commerce means commerce by means of computer, frequently by Internet or other telecommunication links: Electronic commerce is a term used to refer to business transactions on, or using facilities provided by, electronic networks including the Internet. Electronic commerce involves buying, selling, and exchanging goods, services, information, and payment electronically. Increasingly, business is being done by electronic means rather than by traditional face-to-face business and transactions carried out by exchange of paper-based documents. E-Commerce is growing at a staggering rate. In 1991, there were less than 5 million Internet users. By the turn of the century, there are already to be more than 300 million users. And the value of electronic commerce is counted to reach US\$300 billion by that time.

Information technology (IT) in general and EC in particular have become the major facilitators of business activities in the world today. E-Commerce is also a catalyst of fundamental changes in the structure, operations, and management of organizations.

The benefits of E-Commerce to suppliers and consumers are manyfold. For suppliers, main benefits of E-Commerce are the possibility to automate and cut costs in repetitive processes, to reach a wider market, to source products from a wider supplier-base, and to be able to respond to customer queries quickly and cheaply. The lower cost base enables suppliers to price more competitively, and customers to purchase at lower prices. Consumers also benefit from E-Commerce as normal business hours constraints do not exist any more with online access and they can choose and purchase from a bigger market. Characteristics of E-Commerce are:

1. EC is the delivery of goods, services, information, or payments over computer networks or by any other electronic means.
2. EC is the application of technology toward the automation of business transactions and work flow. EC has abundant contents—including information flow, logistics and currency flow, but exclude delivery of physical commodities.
3. EC is a tool that addresses the desire of firms and consumers, and cut service costs while

improving the quantity of goods delivery and increasing the speed of transaction. Electronic commerce decreases the cost of creating, processing, distributing, storing, and retrieving paper-based information. EC lowers telecommunications cost—the Internet is much cheaper than other communications.

4. EC is unlimited by time and space and helpful to global trade. Electronic commerce expands the marketplace to national and international markets. With minimal capital outlay, a company can easily and quickly locate more customers, the best suppliers, and the most suitable business partners worldwide.

#### 1.1.4 E-Commerce in China

With the development of computer and network, EC raise abruptly in Chinese. EC expanded ranging from information technology to investment and producer. In 2000, EC developed and innovate rapidly. The quantity and scope of EC web sites has increased. Chinese basic installation of network, information construction and extension of EC developed in virtuality and Internet users increased time and again. From the statistics of cidy company, the value of commerce was up to 771.6 billion yuan. The figure then will be revised to 1,000 billion in 2005. More than 2500 commerce sites have already registered including business to business web sites, business to consumers web sites, consumers to consumers web sites and service and information commerce sites. Internet and communication develop most quickly now and EC is known very well in china. Today's prediction on the future size of EC is that for 2004, total online shopping are estimated to be 1000 billion yuan. Some EC applications, such as online auctions and online stock trading, ar'e growing quickly. The number of Internet users in china is predicted to reach 1000,000,000 by 2008, first in the world. Experts predict that as many as 50 percent of all internet users will shop online.

The following data show the development of Chinese Internet users:

	Internet Computers	Internet Users	WWW	International Internet bandwidth(Mbps)
Oct, 1997	299,000	620,000	1,500	25.408M
July, 1998	542,000	1,175,000	3,700	84.64M
Jan, 1999	747,000	2,100,000	5,300	143.25M
July, 1999	1,460,000	4,000,000	9,906	241M
Jan, 2000	3,500,000	8,900,000	15,153	351M
July, 2000	6,500,000	16,900,000	27,289	1234M
Jan, 2001	8,920,000	22,500,000	265,405	2799M

From the statistics of CNNIC, the users of internet have got to 22.50 million by the time of Jan.2001. The number showed that china brews a great potential EC market. As the carrier of EC, the number kinds of web sites has up to 265405 by then. From 1997-2001, Chinese Internet developed at the rate of double half a year. We can say Chinese EC has entered into the

commercial operation stage and China has great potentiality in EC development. E-Commerce's swift development claimed E-Commerce laws.

## 1.2 E-Commerce Legal System

The recent explosion of EC has provided businesses with enormous new opportunities undreamt of before. New industries are emerging and new business models are being invented constantly. An entirely new spectrum of business and commerce has emerged. The entire business environment is changing, and so are the regulatory regimes governing it. Law and ethics are the key regulatory components of any business environment. The new business environment includes new legal and ethical problems that businesspeople in the digital economy must be acquainted with in order to handle them properly and operate effectively.

Legal and ethical issues are extremely important in EC, especially in the global marketplace. A large number of legislative bills are pending. Many of the ethical issues regarding EC are interrelated with legal ones, such as those involving privacy rights and intellectual property.

### 1.2.1 Concept of E-Commerce Law

In general, law is a social norm regulating social relations or social behaviors. Laws are enacted by government and are strict legal rules governing the acts of all citizens within their jurisdiction. EC's development and its characteristics have EC laws emerged. EC laws are legal regulations of adjusting EC activities or behaviors. EC laws regulate EC. As one of business, EC is commercial activity and should obey general rules of traditional commerce law. But EC refers commerce by means of computer or network technology, its trade methods and trade environment change greatly, so traditional commerce laws can't solve related questions resulting from EC model. The most important is that EC is commerce which trade means is data communication in Internet. Consequently EC law is legal system regulating commercial relationships which trade means is data communication.

Characteristics of EC laws:

1. EC laws adjust commercial relationships which means of datacommunication. In other words, neither oral nor traditional written commercial relationship is regulated by EC laws.
2. This commercial relationship is resulted from its trade methods and doesn't concern substantive provisions of trade methods. For the reason that trade methods is only the express part of trade constitutions, not *animus* of juristic act or subject matter of transaction.
3. Trade target is not EC relationship's rights and obligations content, but trade method is, that is to say EC is right and obligation relationship arising from application of electronic trade method. Such as admission of electronic contract, storage duty of private password.

### 1.2.2 E-Commerce Legal System

There are three main groups of EC user in any country. They include businesses, private citizens, and government and law enforcement agencies. Regulating EC transactions among these groups of users is a difficult task, as they may want to pursue very different interests. Complicating the matter further is the global dimension of EC. Thus, regulating the relationships among these different groups of users poses an even greater challenge to laws and ethics.

EC is so new that the legal, ethical, and other public policy issues that are necessary for EC's existence are still evolving. The spread of EC and the increased use of information technology have created many new legal issues. Yet such issues are extremely important to the success of EC as they encompass one of the major pillars that support EC applications.

The implementation of EC involves many legal issues. These can be classified in different ways. We have segregated the EC-related legal issues into the following categories:

1. Privacy. This issue is the most important issue for consumers in many countries. And indeed, privacy statements can be found today in most large EC-related Web sites. Privacy extensions are not simple, since the line between legal definitions and ethics is not always clear.

2. Intellectual property. Protecting intellectual property on the Web is very difficult since it is easy and inexpensive to copy and disseminate digitized information. Furthermore, it is very difficult to monitor who is using others' intellectual property and how. Copyright, patents, trademarks, and other intellectual property issues are governed by legislation.

3. Taxation. At the present time, it is illegal to impose new sales taxes on Internet business in America. A possible collision between tax laws of different countries. Being one kind of commercial activities, EC should be levied tax. But it is necessary not impose new taxes on Internet business for the reason of stimulating EC. From the actual operation, levy and administration is very difficult since EC trade is worldwide. Datum on Internet are considerably immense, some of them are commodities. It is impossible to filtrate all information in fact in order to watch and control all trades. It is one of important duties of EC tax laws to probe effective means to levy on Internet business.

4. Computer crimes. Computers are an integral part of all EC processes. Computer crime usually refers to computer fraud and computer abuse. Software piracy belongs to intellectual property infringement and is usually not classified as computer crime.

5. Consumer protection. Many legal issues that deal with consumer protection, ranging from misrepresentation to different kinds of fraud, are related to electronic trade.

6. Other legal issues. Several other EC legal issues exist, including topics such as validity of contracts, legality of infrastructures, jurisdiction over trades, encryption policies, Internet and legal liability of ISPs.

Laws has assumed a new dimension of importance as EC opens up a new spectrum of



unregulated activities. Many of these activities fall into “gray” areas. There are also differences regarding EC laws among different countries. In today’s global economic environment, differences among different countries block the development of EC worldwide.

### 1.2.3 Legal Status of E-Commerce Laws

Global electronic commerce has traditional industrial structure and operating model of market changed basically. As businessman exploring and applying the economic model positively, some international organizations and countries involving China explore legal system to regulate this business model too in order to supply safe and legal environment for the new economic operation. The strive leader for EC legislation is United Nations.

#### 1.2.3.1 United Nations Commission on International Trade Law (UNCITRAL) E-Commerce Legislation and Regulations

##### (1) Draft Convention on Electronic Contracting( December 18, 2003)

This is the current project of the UNCITRAL Working Group on Electronic Commerce, and this draft will be discussed at its next meeting in New York on March 15-19, 2004. The draft has been discussed at the UNCITRAL meetings before this time.

##### (2) Model Law on Electronic Signatures with Guide to Enactment

This model law was finalized and approved by UNCITRAL on July 6, 2001, aiming at to confirm safety, reliability and factuality of electronic signature.

##### (3) Model Law on Electronic Commerce with Guide to Enactment

This model law was adopted by the U.N. General Assembly in 1996. Noting that an increasing number of transactions in international trade are carried out by means of electronic data interchange and other means of communication, commonly referred to as “electronic commerce”, which involve the use of alternatives to paper-based methods of communication and storage of information, so as to ensure legal security in the context of the widest possible use of automated data processing in international trade, and recognizing that global electronic commerce is growing and creating new opportunities for trade, United Nations Commission on international Trade law carried <Model Law on Electronic Commerce> in June, 1996. After many discussions, the numerous international jurists formulated it with intention to guide various countries’ administration and parliament to enactment of EC laws by offering principle and framework. Especially <Model Law on Electronic Commerce> founded rules for data-based electronic contract’s concluding and effect and it became prototype for countries’ EC legislation. The establishment of a model law facilitate the use of electronic commerce that is acceptable to States with different legal, social and economic systems. Adoption of the Model Law on Electronic Commerce by the Commission will assist all States significantly in enhancing their legislation governing EC and in formulating such legislation where none currently exists.

##### (4) A/CN.9/528 Report of Working Group IV (Electronic Commerce)

This report is from the New York UNCITRAL meeting on May 5-9, 2003.

### 1.2.3.2 European Union Electronic Transactions Legislation and Regulations—European Union Directives Related to Electronic Commerce

(1) Directive:

- ① Copyright Harmonisation Directive (2001)
- ② Copyright/Rental Right Directive (Directive 92/100/EFC)
- ③ Copyright/Rental Right Directive (Directive 93/98/EFC)
- ④ Data Protection Direct (Directive 95/46/EC)
- ⑤ Distance Selling Directive Consumer Contracts Directive (Directive 97/7/EC)
- ⑥ Electronic Commerce Directive (Directive 2000/31/EC)

The Directive adopted and updated by the European Parliament on 8 June 2000. Common position adopted by the Council with a view to the adoption of Directive of the European Parliament and of the Council on certain legal aspects of Information Society services, in particular electronic commerce, in the Internal Market (“Directive on electronic commerce”).

⑦ April 15<sup>th</sup>, 1997, A European Initiative in Electronic Commerce was provided by EU commission.

- ⑧ Electronic Money Institutions (Directive 2000/46/EC)
- ⑨ Privacy Protection Telecommunication Sector Directive (Directive 97/66/EC)
- ⑩ Software Protection Directive (Directive 91/250/EEC)

(2) Reports:

① Final Report on the Application of Directive 2001/31/EC (Directive on E-Commerce) (2003) 702 Final, 21 November 2003

② Study for the European Commission—The Legal and Market Aspects 2\ of Electronic Signatures (Final Report), November 2003. This is a 263-page report commissioned by the European Commission on the legal and practical issues raised by implementing the EU Directive on Electronic Signatures.

(3) EU E-Commerce content involved:

- ① Electronic Signatures and Records ( Including Digital Signature)
- ② Intellectual Property
- ③ Privacy/Consumer Protection
- ④ Tax

### 1.2.3.3 World Trade Organization (WTO) E-Commerce Legislation and Regulations

① The International Regulation of E-Commerce—This note discusses the WTO, its importance, and its most significant E-Commerce developments. (January 8, 2001)

② Market Access in Telecommunications and Complementary Services—The WTO’s Role in Accelerating the Development of a Globally Networked Economy. (January 8, 2001)

Moreover, the International Trade Center invited the public to participate in an e-trade

virtual forum on November 1, 2000 and made a decision of worldwide moratorium on E-Commerce Tariffs Will be Extended for at Least 18 months on November 27, 1999.

#### 1.2.3.4 U.S.A E-Commerce Legislation and Regulations

America is the leading country to support E-Commerce, main E-Commerce legislation include:

① <A Framework for Global Electronic Commerce> July 1, 1997.

② <Computer Information Transactions Act(UNITA)> July 24, 2001, adopted by Maine, Maryland etc.

③ <Uniform Electronic Transactions Act (UETA)> December 1, 2003. Arizona California District of Columbia etc. 44 states have enacted UETA except Georiga, New York, South Carolina.

④ <Digital Signature Guidelines> enacted by American Bar Association (ABA).

#### 1.2.3.5 China E-Commerce Legislation and Regulations

Comparing with foreign countries' rapid development of E-Commerce, Chinese is just in a initial stage and our EC legislation is backward relatively, which blocked china EC's development and weakened china businesses's international competition capacity during the knowledge-economic times. In order to stimulate EC's development in china, it is necessary to strengthen EC legislation and regulations to create a fine environment for internal and international EC development.

At present, EC-related laws and regulations include:

##### ① Contract Law

Contract Law was enacted in March, 1999. It affirmed the legality and essential conditions of electronic contract.

##### ② Criminal Law

The latest criminal law was put into practice on October 1, 1997, which involved computer crimes such as invades a computer information system, disturbs functions of a computer information system, disturb data of computer information system, and manufacture and disseminate computer disturbing programmes so on.

##### ③ Draft local EC-related laws actively in guangdong, shanghai and so on.

Moreover in HONGKONG special administrative region <Electronic Trade Regulations> was enacted in 2000. These local regulations can offer some experience for national EC legislation. China is fermenting EC laws actively.

The Internet has posed significant challenges to the traditional legal structure.

## Summary

In this chapter, we investigate the difference between our physical environment consisting

of temporal and geographic boundaries, and cyberspace, the realm of digital transmission not limited by geography. We explore defamation, Spam (unsolicited electronic mail), trademark, pornography and taxation as they related to the Internet. Copyright infringement has come up against file-sharing technology, and privacy continues to be challenged by personalization mechanisms. So it is very necessary to formulate legislation and regulations for E-Commerce.