

# E-Commerce

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E-commerce stands for Electronic Commerce, which implies the process of carrying out trading activities through electronic devices and tools such as computer, mobile, tablets and other inter-connected telecommunication networks. Here the transaction between the buyer and seller is made electronically and so the physical interaction between the parties is absent. The basic requirement is a website with the help of which the transaction can be made. Thus, E-commerce includes:

- Online shopping
- Online ticket booking
- Online banking
- Online hotel booking
- Social networking\* etc.

E-commerce includes the monetary transaction and trading of goods and services over the internet through electronic devices. The entire business organization may be running in offline mode however the trading and transactions occur online. E-commerce requires internet to connect the company with rest of the world. Not all company activities are conducted online except trading and transactions.

Electronic commerce (e-commerce) remains a relatively new, emerging and constantly changing area of business management and information technology. E-commerce is digitally enabled commercial transactions between and among organizations and individuals. Digitally enabled transactions include all transactions mediated by digital technology e.g. Internet. For the most part, this means transactions that occur over the Internet and the Web. Commercial transactions involve the exchange of value (e.g., money) across organizational or individual boundaries in return for products and services. Exchange of value is important for understanding the limits of e-commerce. Without an exchange of value, no commerce occurs.

Some of the definitions of e-commerce often heard and found in publications and the media are:

- E-commerce is where business transactions take place via telecommunications networks, especially the Internet.
- Electronic commerce describes the buying and selling of products, services, and information via computer networks including the Internet.
- Electronic commerce is about doing business electronically.
- E-commerce is defined as the conduct of a financial transaction by electronic means.

# E-Business

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E-business expands to Electronic Business, which implies the online presence of the business firm/merchant. It includes e-commerce and other business activities. It is not restricted to interaction between customers and suppliers only. Indeed it includes the interaction between different departments and employee within the organization. Hence, it includes e-commerce and other business activities such as |Accounting, Finance, Human Resource, Production etc. which are conducted electronically.

E-business may be of two types

- Pure Play
- Brick and Click

Pure play is the form of e-business where the entire business is completely relying on e-business. The organization operates only in virtual environment (only in online mode). Whereas Brick-and-click is the form of e-business where business is operating in both physical as well as virtual environment (that is, online and offline modes).

E-business is comparatively a broader term than e-commerce. In e-business, trading of goods and services and monetary transactions are not enough to be conducted online, it also involves administrative and managerial activities as well. E-commerce can be conducted with the help of a website or mobile application, however, e-business requires some additional systems such as CRM (Customer Relationship Management), ERP (Enterprise Resource Planning) systems etc. For e-commerce to be functional, it is sufficient to connect the company over internet however in e-business, internet, intranet and extranet are appropriately maintained. E-commerce is completely extroverted whereas e-business is ambiverted, meaning it has to keep both internal and functional units online. E-commerce is a part of e-business.

For example, let us imagine school 'A' and school 'B'. Imagine that school 'A' is a physical school that has a website in which it provides some information and also provides the facility of online bill payment however all teaching and learning activities are in physical school only. On the other hand, school 'B' provides every services online including student admission, entrance examination, virtual classes, result system etc. Here we can clearly say that school 'A' has e-commerce whereas school 'B' has e-business.

# Benefits of E-commerce

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The benefits of e-commerce can be seen to affect three major stakeholders: organizations, consumers and society.

## 1. Benefits of e-commerce to organizations:

### a. International marketplace:

What used to be a single physical marketplace located in a geographical area has now become a borderless marketplace including national and international markets. By becoming e-commerce enabled, businesses now have access to people all around the world.

### b. Operational cost saving:

The cost of creating, processing, distributing, storing and retrieving paper-based information has decreased.

### c. Mass customization:

E-commerce has revolutionized the way consumers buy goods and services. Customers can easily search for the product of their choice. Even they can customize the product according to their specific requirement. In physical market, customer has to search for the product and know about its specifications. However, due to e-commerce, it is possible to search products according to specifications.

### d. Enables reduced inventories:

It is possible to collect the customer order and then delivering through JIT (just-in-time) manufacturing. This is particularly beneficial for companies in the high technology sector, where stocks of components held could quickly become obsolete within months. For example, companies like Motorola (mobile phones), and Dell (computers) gather customer orders for a product, transmit them electronically to the manufacturing plant where they are manufactured according to the customer's specifications (like colour and features) and then sent to the customer within a few days.

### e. 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 organisation and its authorized partners. It is also cheaper to send a fax or e-mail via the Internet than direct dialing.

### f. 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.

### g. No more time constraint:

Businesses can be contacted by or contact customers or suppliers at any time.

## 2. Benefits of e-commerce to consumers:

### a. 24/7 access:

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.

### b. More Choices:

Customers not only have a whole range of products that they can choose from and customise, but also an international selection of suppliers.

### c. Price Comparison:

Customers can 'shop' around the world and conduct comparisons either directly by visiting different sites. (for example [www.moneyextra.co.uk](http://www.moneyextra.co.uk) for financial products and services).

### d. 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.

### e. Continuous support system:

After the product delivery, customers can remain in touch with the merchant. The merchant can track the product performance. User can get regular support and give feedback about the product or service.

### f. An environment of competition:

Substantial discounts can be found or value added, as different retailers for customers.

## 3. Benefits of e-commerce to the society:

### a. 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. It also potentially reduces environmental pollution as fewer people have to travel to work regularly.

b. **Connects people:**

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.

c. **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.

# Limitations of e-commerce

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These again will be dealt with according to the three major stakeholders – organizations, consumers and society.

## 1. Limitations of e-commerce to organizations:

### a. 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, have experienced breaches in security where 'a technical oversight' or 'a fault in its systems' led to confidential client information becoming available to all.

### b. Rapidly evolving and changing technology:

There is always a feeling of trying to 'catch up' and not be left behind. On this regards, organization has to pay huge cost to continuously upgrade the system and tools.

### c. Under pressure to innovate:

Organization remains 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 increase that pressure and curtail longer-term competitive advantage.

### d. International Competition:

Organization are facing increased competition from both national and international competitors often leads to price wars and subsequent unsustainable losses for the organization.

### e. 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.

## 2. Limitations of e-commerce to customers:

### a. Cost:

Computing equipment is needed for individuals to participate in the new 'digital' economy, which means an initial capital cost to customers. Also the customer has to bear cost of access to the Internet, whether dial-up or broadband tariffs.

### b. Technical Skill:

A basic technical knowledge is required of both computing equipment and navigation of the Internet and the World Wide Web.

### c. Continuously changing technology:

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.

### d. 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.

### e. Lack of personal touch:

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.

### f. Lack of trust:

There may be the lack of trust because consumers are interacting with faceless computers.

## 3. Limitations of e-commerce to society:

### a. Breakdown in human interaction:

As people become more used to interacting electronically there could be an erosion(divide) 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.

### b. 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.

### c. Technological dependency:

In case of power failure due to natural or accidental situations, the entire commercial activities may be affected.

### d. Environmental problem:

As the entire market is dependent on computing devices, there may be a huge environmental issue caused by the technological waste.

### e. Lack of stock:

Just-in-time manufacturing 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 .

**f. Social norms:**

Due to the ease of starting any business, one can sell socially restricted contents over the internet. For example the porn sites that may attract the children and increase abuses.

# Features of E-Commerce

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Following figure illustrates eight unique features of e-commerce technology that both challenge traditional business thinking and explain why we have so much interest in e-commerce. These unique dimensions of e-commerce technologies suggest many new possibilities for marketing and selling a powerful set of interactive, personalized, and rich messages are available for delivery to segmented, targeted audiences.



E-commerce technologies make it possible for merchants to know much more about consumers and to be able to use this information more effectively than was ever true in the past. Online merchants can use this new information to develop new information asymmetries, enhance their ability to brand products, charge premium prices for high-quality service, and segment the market into an endless number of subgroups, each receiving a different price. We can list out the major features of e-commerce as:

1. Ubiquity:
2. Global Reach:
3. Universal Standards:
4. Social Technology:
5. Personalization and Customization:
6. Information Density:
7. Interactivity:
8. Richness:

Each of the features of e-commerce technology illustrated in above list, deserves a brief exploration, as well as a comparison to both traditional commerce and other forms of technology-enabled commerce.

- 1. Ubiquity (Appearing Everywhere):** In traditional commerce, a marketplace is a physical place you visit in order to transact. For example, television and radio typically motivate the consumer to go someplace to make a purchase. E-commerce, in contrast, is characterized by its ubiquity: it is available just about everywhere, at all times. It liberates the market from being restricted to a physical space and makes it possible to shop from your desktop, at home, at work, or even from your car, using mobile e-commerce. A technical term "marketspace" is used for such mobile marketplace. In other words, marketspace is the marketplace extended beyond physical boundaries of geographical location. The time and money needed to travel in the market is saved. At a broader level, the ubiquity of e-commerce lowers the cognitive energy required to transact in a marketplace. Cognitive energy refers to the mental effort required to complete a task.
- 2. Global Reach:** E-commerce technology permits commercial transactions to cross cultural, regional, and national boundaries far more conveniently and cost-effectively than is true in traditional commerce. As a result, the potential market size for e-commerce merchants is roughly equal to the size of the world's online population. More realistically, the Internet makes it much easier for start-up online merchants within a single country to achieve a national audience than was ever possible in the past. The total number of users or customers an e-commerce business can obtain is a measure of its reach. In contrast, most traditional commerce is local or regional; it involves local merchants or national merchants with local outlets. Television and radio stations, and newspapers, for instance, are primarily local and regional institutions with limited but powerful national networks that can attract a national audience. In contrast to e-commerce technology, these older commerce technologies do not easily cross national boundaries to a global audience.
- 3. Universal Standards:** One strikingly unusual feature of e-commerce technologies is that the technical standards of the Internet, and therefore the technical standards for conducting e-commerce, are universal standards—they are shared by all nations around the world. In contrast, most traditional commerce technologies differ from one nation to the next. The universal technical standards of the Internet and e-commerce greatly lower market entry costs—the cost merchants must pay just to bring their goods to market. At the same time, for consumers, universal standards reduce search costs—the effort required to find suitable products. And by creating a single, one-world marketspace, where prices and product descriptions can be inexpensively displayed for all to see, price discovery becomes simpler, faster, and more accurate. With e-commerce technologies, it is possible for the first time in history to easily find many of the suppliers, prices, and delivery terms of a specific product anywhere in the world, and to view them in a coherent, comparative environment. Although this is not necessarily realistic today for all or even many products, it is a potential that will be exploited in the future.
- 4. Social Technologies:** In a way quite different from all previous technologies, e-commerce technologies have evolved to be much more social by allowing users to create and share content with a worldwide community. Using these forms of communication, users are able to create new social networks and strengthen existing ones. All previous mass media in modern history, including the printing press, use a broadcast model (one-to-many) where content is created in a central location by experts (professional writers, editors, directors, actors, and producers) and audiences are concentrated in huge aggregates to consume a standardized product. The telephone would appear to be an exception but it is not a "mass communication" technology. Instead the telephone is a one-to-one technology. The Internet and e-

commerce technologies have the potential to invert this standard media model by giving users the power to create and distribute content on a large scale, and permit users to program their own content consumption. The Internet provides a unique, many-to-many model of mass communication.

5. **Personalization and Customization:** E-commerce technologies permit personalization. Merchants can target their marketing messages to specific individuals by adjusting the message to a person's name, interests, and past purchases. Today this is achieved in a few milliseconds and followed by an advertisement based on the consumer's profile.

The technology also permits customization. Changing the delivered product or service based on a user's preferences or prior behavior. Given the interactive nature of e-commerce technology, much information about the consumer can be gathered in the marketplace at the moment of purchase. With the increase in information density, a great deal of information about the consumer's past purchases and behavior can be stored and used by online merchants. The result is a level of personalization and customization unthinkable with traditional commerce technologies.

For instance, you may be able to shape what you see on television by selecting a channel, but you cannot change the contents of the channel you have chosen. In contrast, the online version of the Financial Times allows you to select the type of news stories you want to see first, and gives you the opportunity to be alerted when certain events happen. Personalization and customization allow firms to precisely identify market segments and adjust their messages accordingly.

6. **Information Density & Transparency:** E-commerce technologies vastly increase information density—the total amount and quality information available to all market participants, consumers, and merchants alike. E-commerce technologies reduce information collection, storage, processing, and communication costs. At the same time, these technologies greatly increase the currency, accuracy, and timeliness of information—making information more useful and important than ever. As a result, information becomes more plentiful, less expensive, and of higher quality. A number of business consequences result from the growth in information density. In e-commerce markets, prices and costs become more transparent. Price transparency refers to the ease with which consumers can find out the variety of prices in a market; cost transparency refers to the ability of consumers to discover the actual costs merchants pay for products. But the real advantages for merchants as well. Online merchants can discover much more about consumers; this allows merchants to segment the market into groups willing to pay different prices and permits them to engage in price discrimination—selling the same goods, or nearly the same goods, to different targeted groups at different prices.

For instance, an online merchant can discover a consumer's avid interest in expensive exotic vacations, and then pitch expensive exotic vacation plans to that consumer at a premium price, knowing this person is willing to pay extra for such a vacation. At the same time, the online merchant can pitch the same vacation plan at a lower price to more price sensitive consumers. Merchants also have enhanced abilities to differentiate their products in terms of cost, brand, and quality.

7. **Interactivity:** Unlike any of the commercial technologies of the twentieth century, with the possible exception of the telephone, e-commerce technologies allow for interactivity, meaning they enable two-way communication between merchant and consumer and among consumers. Traditional television, for instance, cannot ask viewers questions or enter into conversations with them, or request that customer information be entered into a form. In contrast, all of these activities are possible on an e-commerce site and are now commonplace with smart phones, social networks, and Twitter. Interactivity allows an online merchant to engage a consumer in ways similar to a face-to-face experience.

8. **Richness:** Information richness refers to the complexity and content of a message (Evans and Wurster, 1999). Traditional markets, national sales forces, and small retail stores have great richness: they are able to provide personal, face-to-face service using aural and visual cues when making a sale. The richness of traditional markets makes them a powerful selling or commercial environment. Prior to the development of the Web, there was a trade-off between richness and reach: the larger the audience reached, the less rich the message. The Internet has the potential for offering considerably more information richness than traditional media such as printing presses, radio, and television because it is interactive and can adjust the message to individual users. Chatting with an online sales person, for instance, comes very close to the customer experience in a small retail shop. The richness enabled by the Internet allows retail and service merchants to market and sell "complex" goods and services that heretofore required a face-to-face presentation by a sales force to a much larger audience.

The features of e-commerce and their significance are tabulated in the following table:

E-commerce feature	Significance
<b>Ubiquity</b> —Internet/Web technology is available everywhere: at work, at home, and elsewhere via mobile devices, anytime.	The marketplace is extended beyond traditional boundaries and is removed from a temporal and geographic location. "Marketspace" is created; shopping can take place anywhere. Customer convenience is enhanced, and shopping costs are reduced.
<b>Global reach</b> —The technology reaches across national boundaries, around the earth.	Commerce is enabled across cultural and national boundaries seamlessly and without modification. "Marketspace" includes potentially billions of consumers and millions of businesses worldwide.
<b>Universal standards</b> —There is one set of technology standards, namely Internet standards.	There is a common, inexpensive, global technology foundation for businesses to use.
<b>Social technology</b> —User content generation and social networks.	New Internet social and business models enable user content creation and distribution, and support social networks.
<b>Personalization/Customization</b> —The technology allows personalized messages to be delivered to individuals as well as groups.	Personalization of marketing messages and customization of products and services are based on individual characteristics.
<b>Information density &amp; transparency</b> —The technology reduces information costs and raises quality and transparency.	Information processing, storage, and communication costs drop dramatically, while currency, accuracy, and timeliness improve greatly. Information becomes plentiful, cheap, and accurate.
<b>Interactivity</b> —The technology works through interaction with the user.	Consumers are engaged in a dialog that dynamically adjusts the experience to the individual, and makes the consumer a coparticipant in the process of delivering goods to the market.
<b>Richness</b> —Video, audio, and text messages are possible.	Video, audio, and text marketing messages are integrated into a



single marketing message and consuming experience.

# Pure Vs Partial E-Commerce

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In the traditional commerce, the entire transaction including searching of product, payment and delivery is done physically. Based on whether the transactions are completely digitalized or not, e-commerce can be divided into pure e-commerce and partial e-commerce.

## 1. Pure e-commerce:

An e-commerce service is said to be pure e-commerce if all the transactions including product searching, payment, delivery and support are conducted online. For an e-commerce to be pure, the product and processes must be digitalized. That means, in e-commerce, all the dimensions are digital. For example buying music on iTunes, movies on NetFlix, antivirus purchasing, mobile banking etc.

In pure e-commerce, product, services and other business processes are highly digitalized.

## 2. Partial e-commerce:

An e-commerce service is said to be partial if it involves both physical and digital dimensions. Most of the e-commerce merchants that sell physical products online are of this nature. For example daraz is an e-commerce merchant that executes all of its dimensions online except product delivery.

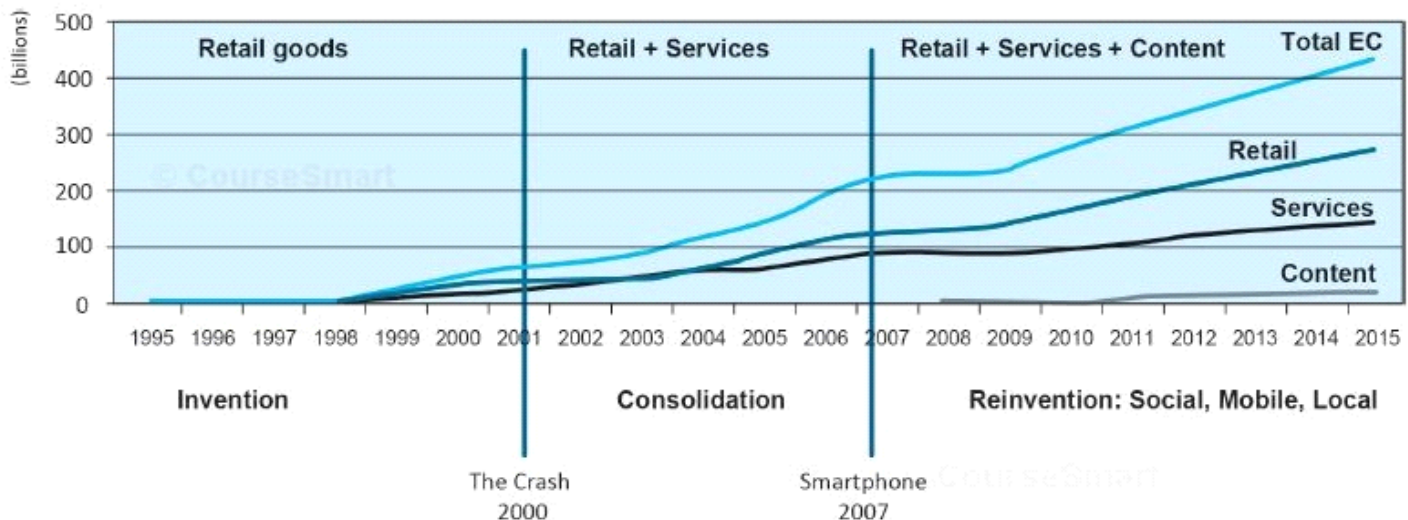
In partial e-commerce, the business processes are highly digitalized probably except the product delivery.

# History of E-Commerce

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Although e-commerce is not very old, it already has a tumultuous history. The history of e-commerce can be usefully divided into three periods:

1. 1995-2000, the period of invention
2. 2001-2006, the period of consolidation
3. 2007-present, a period of reinvention with social, mobile, and local expansion



## E-COMMERCE 1995-2000: INVENTION

The early years of e-commerce were a period of explosive growth and extraordinary innovation, beginning in 1995 with the first widespread use of the Web to advertise products. During this Invention period, e-commerce meant selling retail goods, usually quite simple goods, on the Internet. There simply was not enough bandwidth for more complex products. Marketing was limited to unsophisticated static display ads and not very powerful search engines. The Web policy of most large firms, if they had one at all, was to have a basic static Web site depicting their brands.

The rapid growth in e-commerce was fueled by over \$125 billion in venture capital in the United States. This period of e-commerce came to a close in 2000 when stock market valuations in the United States plunged, with thousands of companies disappearing (the "dot-com bubble burst").

The early years of e-commerce were also one of the most euphoric of times in global commercial history. It was also a time when key e-commerce concepts were developed. For computer scientists and information technologists, the early success of e-commerce was a powerful vindication of a set of information technologies that had developed over a period of 40 years—extending from the development of the early Internet, to the PC, to local area networks.

Technologists celebrated the fact that the Internet was not controlled by anyone or any nation, but was free to all. They believed the Internet—and the e-commerce that rose on this infrastructure—should remain a self-governed, self-regulated environment.

For economists, the early years of e-commerce raised the realistic prospect of a nearly perfect competitive market: where price, cost, and quality information are equally distributed, a nearly infinite set of suppliers compete against one another, and customers have access to all relevant market information worldwide. Merchants in turn would have equal direct access to hundreds of millions of customers. Transaction costs would plummet because search costs—the cost of searching for prices, product descriptions, payment settlement, and order fulfillment—would all fall drastically. For merchants, the cost of searching for customers would also fall, reducing the need for wasteful advertising. At the same time, advertisements could be personalized to the needs of every customer. Prices and even costs would be increasingly transparent to the consumer, who could now know exactly and instantly the worldwide best price, quality, and availability of most products. Information asymmetry would be greatly reduced. Given the instant

nature of Internet communications, the availability of powerful sales information systems, and the low cost involved in changing prices on a Web site (low menu costs), producers could dynamically price their products to reflect actual demand, ending the idea of one national price, or one suggested manufacturer's list price. In turn, market middlemen—the distributors and wholesalers who are intermediaries between producers and consumers, each demanding a payment and raising costs while adding little value—would disappear (disintermediation). Manufacturers and content originators would develop direct market relationships with their customers. The resulting intense competition, the decline of intermediaries, and the lower transaction costs would eliminate product brands, and along with it, the possibility of monopoly profits based on brands, geography, or special access to factors of production. E-commerce was evolving as friction-free commerce.

For real-world entrepreneurs, their financial backers, and marketing professionals, e-commerce represented an extraordinary opportunity to earn far above normal returns on investment. The e-commerce marketplace represented access to millions of consumers worldwide who used the Internet and a set of marketing communications technologies (e-mail and Web pages) that was universal, inexpensive, and powerful. In this new marketplace, extraordinary profits would go to first movers—those firms who were first to market in a particular area and who moved quickly to gather market share. Customers became accustomed to using a company's unique Web interface and feature set, they could not easily be switched to competitors.

The number of visitors to a site ("eyeballs"), and gross revenue became far more important in the earlier stages of an online firm than earnings or profits. Entrepreneurs and their financial backers in the early years of e-commerce expected that extraordinary profitability would come, but only after several years of losses. Traditional corporations were too slow and bureaucratic.

Overall, this period of e-commerce was characterized by experimentation, capitalization, and hyper competition.

### **E-COMMERCE 2001-2006: CONSOLIDATION**

In the second period of e-commerce, from 2000 to 2006, a sobering period of reassessment of e-commerce occurred, with many critics doubting its long-term prospects. Emphasis shifted to a more "business-driven" approach rather than being technology driven; large traditional firms learned how to use the Web to strengthen their market positions; brand extension and strengthening became more important than creating new brands. During this period of consolidation, e-commerce changed to include not just retail products but also more complex services such as travel and financial services. This period was enabled by widespread adoption of broadband networks in American homes and businesses, coupled with the growing power and lower prices of personal computers that were the primary means of accessing the Internet, usually from work or home.

The Web policy of both large and small firms expanded to include a broader "Web presence" that included not just Web sites, but also e-mail, display, and search engine campaigns; multiple Web sites for each product; and the building of some limited community feedback facilities. E-commerce in this period was growing again by more than 10% a year.

### **E-COMMERCE 2007-PRESENT: REINVENTION**

Beginning in 2007 with the introduction of the iPhone, to the present day, e-commerce has been transformed yet again by the rapid growth of online social networks, widespread adoption of consumer mobile devices such as smart phones and tablet computers, and the expansion of e-commerce to include local goods and services. The defining characteristics of this period are often characterized as the "social, mobile, local" online world. In this period, entertainment content begins to develop as a major source of e-commerce revenues and mobile devices become entertainment centers, as well as on-the-go shopping devices for retail goods and services. Marketing is transformed by the increasing use of social networks, word-of-mouth, viral marketing, and much more powerful data repositories and analytic tools for truly personal marketing. Firms' online policies expand in the attempt to build a digital presence that surrounds the online consumer with coordinated marketing messages based on their social network memberships, use of search engines and Web browsers, and even their personal e-mail messages, social networks, the mobile platform, and local commerce. This period is as much a sociological phenomenon as it is a technological or business phenomenon.

Following table summarizes the evolution of e-commerce during three phases:

INVENTION	CONSOLIDATION	RE-INVENTION
Technology driven	Business driven	Mobile technology enables social, local, and mobile commerce
Revenue growth emphasis	Earnings and profits emphasis	Audience and social network connections emphasis
Venture capital financing	Traditional financing	Smaller VC investments; early small-firm buyouts by large online players
Ungoverned	Stronger regulation and governance	Extensive government surveillance
Entrepreneurial	Large traditional firms	Entrepreneurial social and local firms
Disintermediation	Strengthening intermediaries	Proliferation of small online intermediaries renting business processes of larger firms
Perfect markets	Imperfect markets, brands, and network effects	Continuation of online market imperfections; commodity competition in select markets
Pure online strategies	Mixed "bricks-and-clicks" strategies	Return of pure online strategies in new markets; extension of bricks-and-clicks in traditional retail markets
First-mover advantages	Strategic-follower strength; complementary assets	First-mover advantages return in new markets as traditional Web players catch up
Low-complexity retail products	High-complexity retail products and services	Retail, services, and content

# E-Commerce Framework (5 pillars of e-commerce)

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E-commerce framework is composed of five pillars as listed below.

1. People
2. Public Policy
3. Marketing & Advertisement
4. Support Services
5. Business partnership

**People:** They are the direct or indirect user of e-commerce. They may be playing their role in merchant side or costumer side or intermediaries. System specialist and employees also belong to the member of this pillar.

**Public Policy:** The legal issues of government and regulating strategy of the e-commerce merchant form a second pillar of e-commerce. Government legal issues include taxation laws, privacy act etc. and the merchant's issues like terms and conditions, copyrights, trademarks etc. are the major rods of this pillar.

**Marketing & Advertisement:** In the latest time, web presence of an e-commerce vendor is the major strategy. This includes the strategy to attract the users by using social media through customized advertisements. This is supported by market research, promotions, content marketing, digital advertising, influencer engagement etc.

**Support Services:** One of the major pillar of an e-commerce is support service. It is the additional service that keeps the e-commerce running. This may include after sales support, payment gateway services, logistic services, content services etc.

**Business Partnership:** Mutually beneficial business relationships that can support e-commerce is another strong asset these days. This may include affiliate programs, joint venture, e-marketplace etc.

# Types of E-Commerce

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There are several different types of e-commerce and many different ways to characterize them. For the most part, we distinguish different types of e-commerce by the nature of the market relationship—who is selling to whom. Social, mobile, and local e-commerce can be looked at as subsets of these types of e-commerce.

The major types of e-commerce include:

1. Business-to-Consumer e-commerce (B2C)
2. Business-to-Business e-commerce (B2B)
3. Consumer-to-Consumer e-commerce (C2C)
4. Consumer-to-Business e-commerce (C2B)

**Business-to-Consumer e-commerce (B2C):** The most commonly discussed type of e-commerce is business-to-consumer (B2C) e-commerce, in which online businesses attempt to reach individual consumers. B2C commerce includes purchases of retail goods, travel services, and online content. B2C e-commerce has grown exponentially since 1995, and is the type of e-commerce that most consumers are likely to encounter. There are different models of B2C e-commerce models such as: portals, online retailers, content providers, transaction brokers, market creators, service providers, and community providers. For example, When a good or service is sold to an individual consumer by a business, e.g., we buy a pair of shoes from an online retailer.

**Business-to-Business e-commerce (B2B):** Business-to-Business (B2B) e-commerce, in which businesses focus on selling to other businesses, is the largest form of e-commerce. B2B e-commerce has significant growth potential. The ultimate size of B2B e-commerce is potentially huge. There are two primary business models used within the B2B arena: Net marketplaces, which include e-distributors, e-procurement companies, exchanges and industry consortia, and private industrial networks. For example, When a good or service is sold by a business to another business, e.g., a software-as-a-service is sold by a business for other businesses to use.

**Consumer-to-Consumer e-commerce (C2C):** Consumer-to-consumer (C2C) e-commerce provides a way for consumers to sell to each other, with the help of an online market maker such as eBay. In C2C e-commerce, the consumer prepares the product for market, places the product for auction or sale, and relies on the market maker to provide catalog, search engine, and transaction-clearing capabilities so that products can be easily displayed, discovered, and paid for by another consumer. For example, When a good or service is sold by a consumer to another consumer, e.g., we sell our old furniture on eBay to another consumer.

**Consumer-to-Business e-commerce (C2B):** Consumer-to-Business (C2B) e-commerce model is the least used one, however at present, it is increasing exponentially. In this model, an individual can sell products or services to the merchants. For example, different freelancing sites, photograph selling sites etc.

The other types of e-commerce are:

- M-Commerce
- U-Commerce
- Social E-Commerce
- Local E-Commerce

**Mobile E-Commerce or M-Commerce:** Mobile e-commerce, or m-commerce, refers to the use of mobile devices to enable online transactions. m-commerce involves the use of cellular and wireless networks to connect laptops, smart phones such as the iPhone, Android, and BlackBerry, and tablet computers such as the iPad to the Internet. Once connected, mobile consumers can conduct transactions, including stock trades, in-store price comparisons, banking, travel reservations, and more. Due to the advancement in

smartphone technology, the users are geometrically increasing in smart phone technology. Thus, e-commerce is largely focusing on mobile devices giving rise to a new type of e-commerce called as m-commerce.

**Social E-Commerce:** Social e-commerce is e-commerce that is enabled by social networks and online social relationships. It is sometimes also referred to as Facebook commerce, but in actuality is a much larger phenomenon that extends beyond just Facebook. The growth of social e-commerce is being driven by a number of factors, including the increasing popularity of social sign-on (signing on to Web sites using your Facebook or other social network ID), network notification (the sharing of approval or disapproval of products, services, and content via Facebook's Like button or Twitter tweets), online collaborative shopping tools, and social search (recommendations from online trusted friends).

**Local E-Commerce:** Local e-commerce, as its name suggests, is a form of e-commerce that is focused on engaging the consumer based on his or her current geographic location. Local merchants use a variety of online marketing techniques to drive consumers to their stores. Local e-commerce is the third prong of the social, mobile, local e-commerce wave, and is expected to grow rapidly.

**U-Commerce:** Ubiquitous Commerce also known as U-Commerce, refers to a variety of goods and/or services. Sometimes, it is used to refer to the wireless, continuous communication and exchange of data and information between and among retailers, customers, and systems regardless of location, devices used, or time of day. Ubiquitous Commerce, Universal Commerce or Ultimate Commerce (ubiquitous meaning ever-present), depending on whom you ask. It describes the concept that buyers and sellers have the potential to interact anywhere, anytime thanks to the use of wireless devices, such as cell phones, by buyers to connect with sellers via the Internet where orders can be placed online and payments can be made via credit card or PayPal. The Association for Information Systems states that the qualities of U-Commerce include ubiquity, uniqueness, universality and unison.

- Ubiquitous = represents the ability to be connect at any time and in any place as well as the integration of human-computer interaction into most devices and processes, e.g. household objects.
- Uniqueness = stands for the unique identification of each customer or user regarding his identity, current context, needs and location resulting in an individual service
- Universal = is related to everyone's devices which can be used multifunctional and as well as universal –you will always be connected no matter of your place.
- Unison = constitutes the data integration across applications and devices to provide users consistent and fully access to required information independent of device and location. The term unison also relates to fully synchronized devices at any time.

U-Commerce is described as the evolution of E-Commerce and M-Commerce.



# Challenges in E-commerce

Saturday, August 22, 2020 10:02 AM

1. Online Identity Verification Problem: People may enter wrong information.
2. Competitor Analysis: Many vendors offering same product. You must know market.
3. Maintaining Customer Loyalty: Keep existing customer and add new.
4. Product Refund and Refund Policy:
5. Shipping Cost:
6. Retailers and Manufacturer Selling Same Product: D2C retailers are biggest competitors.
7. Data Security:
8. Profound Online Presence:
9. Trust
10. Switching to M-Commerce and IOT-Commerce

Explain in your own words.

# Status of E-commerce in Nepal

Saturday, August 22, 2020 10:03 AM

Add your assignment

# Overview of Electronic Transaction Act of Nepal

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**Chapter 1 : Preliminary (Clauses 1-2)**

**Chapter 2 : Provisions Relating to Electronic Record and Digital Signature (Clauses 3-9)**



**Chapter 3 : Provision Relating to Dispatch, Receipt and Acknowledgement of Electronic Records (Clauses 10-12)**

**Chapter 4 : Provisions Relating to Controller and Certifying Authority (Clauses 13-29)**

**\*Chapter 5 : Provisions Relating to Digital Signature and Certificates (Clauses 30-34)**

**\*Chapter 6 : Functions, Duties and Rights of Subscriber (Clauses 35-38)**

**\*Chapter 7 : Electronic Record and Government use of Digital Signature (Clauses 39-41)**

**Chapter 8 : Provisions Relating to Network Service (Clauses 42-43)**

**\*Chapter 9 : Offence Relating to Computer (Clauses 44-59)**

**Chapter 10 : Provisions Relating to Information Technology Tribunal (Clauses 60-65)**

**Chapter 11 : Provisions Relating to Information Technology Appellate Tribunal (Clauses 66-71)**

**Chapter 12 : Miscellaneous (Clauses 72-80)**

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**परिच्छेद १ : प्रारम्भिक (उपधारा १-२)**

**परिच्छेद २ : विधुतीय अभिलेख तथा डिजिटल हस्ताक्षर सम्बन्धी व्यवस्था (उपधारा ३-९)**



**परिच्छेद ३ : विधुतीय अभिलेखको सम्प्रेषण, प्राप्ति र स्वीकार सम्बन्धी व्यवस्था (उपधारा १०-१२)**

**परिच्छेद ४ : नियन्त्रक तथा प्रमाणीकरण गर्ने निकाय सम्बन्धी व्यवस्था (उपधारा १३-२९)**

**\*परिच्छेद ५ : डिजिटल हस्ताक्षर तथा प्रमाणपत्र सम्बन्धी व्यवस्था (उपधारा ३०-३४)**

**\*परिच्छेद ६ : ग्राहकको काम, कर्तव्य र अधिकार (उपधारा ३५-३८)**

**\*परिच्छेद ७ : विधुतीय अभिलेख र डिजिटल हस्ताक्षरको सरकारी प्रयोग (उपधारा ३९-४१)**

**परिच्छेद ८ : नेटवर्क सेवा सम्बन्धी व्यवस्था (उपधारा ४२-४३)**

**\*परिच्छेद ९ : कम्प्युटर सम्बन्धी कसुर (उपधारा ४४-५९)**

**परिच्छेद १० : सूचना प्रविधि न्यायाधिकरण सम्बन्धी व्यवस्था (उपधारा ६०-६५)**

**परिच्छेद ११ : सूचना प्रविधि पुनरावेदन न्यायाधिकरण सम्बन्धी व्यवस्था (उपधारा ६६-७१)**

**परिच्छेद १२ : विविध (उपधारा ७२-८०)**

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**परिच्छेद १ : प्रारम्भिक (उपधारा १-२)**

**परिच्छेद २ : विद्युतीय अभिलेख तथा डिजिटल हस्ताक्षर सम्बन्धी व्यवस्था (उपधारा ३-९)**

**परिच्छेद ३ : विद्युतीय अभिलेखको सम्प्रेषण, प्राप्ति र स्वीकार सम्बन्धी व्यवस्था (उपधारा १०-१२)**

**परिच्छेद ४ : नियन्त्रक तथा प्रमाणीकरण गर्ने निकाय सम्बन्धी व्यवस्था (उपधारा १३-२९)**

**\*परिच्छेद ५ : डिजिटल हस्ताक्षर तथा प्रमाणपत्र सम्बन्धी व्यवस्था (उपधारा ३०-३४)**

**\*परिच्छेद ६ : ग्राहकको काम, कर्तव्य र अधिकार (उपधारा ३५-३८)**

**\*परिच्छेद ७ : विद्युतीय अभिलेख र डिजिटल हस्ताक्षरको सरकारी प्रयोग (उपधारा ३९-४१)**

**परिच्छेद ८ : नेटवर्क सेवा सम्बन्धी व्यवस्था (उपधारा ४२-४३)**

**\*परिच्छेद ९ : कम्प्युटर सम्बन्धी कसुर (उपधारा ४४-५९)**

**परिच्छेद १० : सूचना प्रविधि न्यायाधिकरण सम्बन्धी व्यवस्था (उपधारा ६०-६५)**

**परिच्छेद ११ : सूचना प्रविधि पुनरावेदन न्यायाधिकरण सम्बन्धी व्यवस्था (उपधारा ६६-७१)**

**परिच्छेद १२ : विविध (उपधारा ७२-८०)**

## Major Points:

२. परिभाषा : विषय वा प्रसङ्गले अर्को अर्थ नलागेमा यस ऐनमा,-

(क) “एसिमेट्रिक क्रिप्टो सिस्टम” भन्नाले डिजिटल हस्ताक्षर सृजना गर्ने निजी साँचो र डिजिटल हस्ताक्षरको सम्पुष्टि गर्ने सार्वजनिक साँचो समावेश भएको एक सुरक्षित जोडी साँचो उत्पन्न गर्ने प्रणाली सम्भन्धु पर्छ ।

(ख) “इजाजतपत्र” भन्नाले दफा १८ को उपदफा (३) बमोजिम प्राप्त गरेको इजाजतपत्र सम्भन्धु पर्छ ।

(ग) “उत्पन्नकर्ता” भन्नाले निवृत्तीय अभिलेख उत्पन्न गर्ने जम्मा गर्ने वा सम्प्रेषण गर्ने

### परिच्छेद-२

#### विद्युतीय अभिलेख तथा डिजिटल हस्ताक्षर सम्बन्धी व्यवस्था

३. विद्युतीय अभिलेखको प्रामाणिकता : (१) यस दफाको अधीनमा रही कुनै पनि ग्राहकले आफ्नो डिजिटल हस्ताक्षरद्वारा कुनै विद्युतीय अभिलेखलाई प्रामाणिकता प्रदान गर्न सक्नेछ ।

(२) उपदफा (१) बमोजिम विद्युतीय अभिलेखलाई प्रामाणिकता प्रदान गर्ने कार्य गर्दा त्यस्तो विद्युतीय अभिलेख अर्को विद्युतीय अभिलेखमा हस्तान्तरण हुने कार्य एसिमेट्रिक क्रिप्टो सिस्टम र ह्यास फङ्क्शनको प्रयोगबाट भएको हुन आवश्यक हुनेछ ।

(See all from this chapter)

### परिच्छेद-५

## परिच्छेद-५

### डिजिटल हस्ताक्षर तथा प्रमाणपत्र सम्बन्धी व्यवस्था

३०. प्रमाणीकरण गर्ने निकायले प्रमाणपत्र जारी गर्न सक्ने : यस ऐन बमोजिम इजाजतपत्र वा मान्यता प्राप्त गरेको प्रमाणीकरण गर्ने निकायले मात्र डिजिटल हस्ताक्षर प्रमाणपत्र जारी गर्न सक्नेछ ।

## परिच्छेद-६

### ग्राहकको काम, कर्तव्य र अधिकार

३५. जोडी साँचो सृजना गर्ने : (१) प्रमाणीकरण गर्ने निकायबाट जारी गरिएको र ग्राहकद्वारा स्वीकार गरिएको प्रमाणपत्रमा सूचीकृत गरिनु पर्ने सार्वजनिक साँचो समावेश भएको जोडी साँचो ग्राहकले नै सृजना गर्नु पर्ने भएमा ग्राहकले त्यस्तो जोडी साँचो सृजना गर्दा सुरक्षित एसिमेट्रिक क्रिप्टो सिस्टमको प्रयोग गर्नु पर्नेछ ।

## परिच्छेद-७

### विद्युतीय अभिलेख र डिजिटल हस्ताक्षरको सरकारी प्रयोग

३९. विद्युतीय स्वरूपमा सरकारी कागजपत्रहरु प्रकाशन गर्न सकिने : (१) नेपाल सरकारले प्रचलित कानून बमोजिम नेपाल राजपत्रमा प्रकाशन गर्नु पर्ने अध्यादेश, ऐन, नियम, विनियम, गठन आदेश, सूचना वा अन्य विषयलाई विद्युतीय स्वरूपमा समेत प्रकाशन गर्न सक्नेछ ।

(२) सरकारी निकाय वा सार्वजनिक संस्था वा नेपाल राज्यभित्र कारोबार गर्ने बैङ्क वा वित्तीय संस्थामा प्रचलित कानून बमोजिम फाइलिङ्ग गर्नु पर्ने कुनै फाराम, निवेदन वा अन्य कुनै कागजात वा सृजना गर्नु पर्ने वा सुरक्षित राख्नु पर्ने वा संरक्षण गर्नु पर्ने कुनै अभिलेख वा जारी गर्नु पर्ने वा दिनु पर्ने कुनै इजाजतपत्र वा अनुमतिपत्र वा स्वीकृति वा प्रमाणपत्र वा भुक्तानी लिनु पर्ने कुनै रकमलाई विद्युतीय स्वरूपमा पनि फाइलिङ्ग गर्न, सृजना गर्न, सुरक्षित राख्न वा संरक्षण गर्न वा जारी गर्न वा प्रदान गर्न वा विद्युतीय सञ्चार माध्यम मार्फत भुक्तानी लिन दिन सकिनेछ र यसरी विद्युतीय स्वरूप वा विद्युतीय सञ्चार माध्यम प्रयोग भएको कारणबाट त्यस्ता फाराम, निवेदन, कागजात, अभिलेख, इजाजतपत्र, अनुमतिपत्र वा स्वीकृति, प्रमाणपत्र वा भुक्तानीलाई कानूनी मान्यता दिनबाट इन्कार गरिने छैन ।

## कम्प्युटर सम्बन्धी कसुर

४४. कम्प्युटर स्रोत सङ्केतको चोरी, नष्ट वा परिवर्तन गर्ने : प्रचलित कानूनले कम्प्युटर स्रोतको सङ्केत (सोर्स कोड) लाई यथावत् राख्ने गरी तत्काल व्यवस्था गरेको अवस्थामा कुनै व्यक्तिले कुनै कम्प्युटर, कम्प्युटर कार्यक्रम, कम्प्युटर प्रणाली वा कम्प्युटर नेटवर्कका लागि प्रयोग हुने कम्प्युटर स्रोतको सङ्केत (सोर्स कोड) लाई जानी-जानी वा बदनियत राखी चोरी गरेमा, नष्ट गरेमा, परिवर्तन गरेमा वा त्यस्तो काम गर्न लगाएमा निजलाई तीन वर्षसम्म कैद वा दुई लाख रुपैयाँसम्म जरिवाना वा दुवै सजाय हुनेछ ।

स्पष्टीकरण : यस दफाको प्रयोजनका लागि “कम्प्युटर स्रोत सङ्केत” (कम्प्युटर सोर्स कोड) भन्नाले कम्प्युटर कार्यक्रमहरूको सूचीकरण, कम्प्युटर निर्देशन (कमान्ड), कम्प्युटर डिजाइन र कम्प्युटर लेआउट तथा कम्प्युटर सम्पदाको जुनसुकै स्वरूपमा रहेको कार्यक्रम विश्लेषण (प्रोग्राम एनालिसिस) लाई सम्झनु पर्छ ।

## **कम्प्युटर सम्बन्धि कसुर**

कसुर	सजाय
44. कम्प्युटर स्रोत संकेतको चोरी, नष्ट वा परिवर्तन गर्ने	3 वर्ष सम्म कैद वा 2 लाख रुपैयाँ सम्म जरिवाना वा दुबै सजाय ।
45. कम्प्युटर सामग्रीमा अनधिकृत पहुँच	
46. कम्प्युटर र सूचना प्रणालीमा क्षति पुर्याउने	
47. बिद्वतीय स्वरूपमा गैरकानुनी कुरा प्रकाशन गर्ने	1 लाख रुपैयाँ सम्म जरिवाना वा 5 वर्ष सम्म कैद वा दुबै सजाय । सोहि कसुर पटक पटक गरेमा अघिल्लो पटकको डेढी सजाय ।
48. गोपनीयता भंग गर्ने	1 लाख रुपैयाँ सम्म जरिवाना वा 2 वर्ष सम्म कैद वा दुबै सजाय ।
49. झुट्टा व्यहोराको सुचना दिने	
50. झुट्टा इजाजतपत्र वा प्रमाणपत्र पेश गर्ने वा देखाउने	



51. तोकिएको विवरण वा कागजात दाखिला नगर्ने	50 हजार रुपैयाँ सम्म जरिवाना
52. कम्प्युटर सम्बन्धि जालसाजी गर्ने	विगो कायम गरि 1 लाख रुपैयाँ सम्म जरीवाना वा 2 वर्ष सम्म कैद वा दुबै सजाय ।
53. कम्प्युटर सम्बन्धी कसुर गर्ने दुरुत्साहन गर्ने	कसुरको मात्र हेरी 50 हजार रुपैयाँ सम्म जरिवाना वा 6 महिना सम्म कैद वा दुबै सजाय ।
54. माथि उल्लेखित कसुरमा मतियारलाई	कसुर गर्ने व्यक्तिलाई भएको सजायको आधा सजाय ।
55+57. नेपाल बाहिर बसी कसुर गरेमा वा संगठित संस्थाले कसुर गरेमा वा यो ऐन अनर्गत बनेको नियम उल्लंघन भएमा	कसुरको मात्र हेरी 50 हजार रुपैयाँ सम्म जरिवाना वा 6 महिना सम्म कैद वा दुबै सजाय ।

७४. **उजुर गर्ने हदम्याद** : यो ऐन वा यस ऐन अन्तर्गत बनेको नियमको उल्लंघन भएकोमा वा यो ऐन बमोजिम कसूर ठहर्ने कुनै कुरा भएकोमा त्यस्तो उल्लंघन वा कसूर भए गरेको थाहा पाएको मितिले पैंतीस दिनभित्र उजुर गर्नु पर्नेछ ।

७५. **नेपाल सरकार वादी हुने** : (१) यस ऐन बमोजिम कसूर ठहर्ने मुद्दा नेपाल सरकार वादी भई चल्नेछ र त्यस्तो मुद्दा सरकारी मुद्दा सम्बन्धी ऐन, २०४९ को अनुसूची-१ मा समावेश भएको मानिनेछ ।

(२) उपदफा (१) बमोजिमको मुद्दामा अनुसन्धान गर्दा प्रहरीले नियन्त्रक वा अन्य सम्बन्धित विशेषज्ञको सहयोग लिनु पर्नेछ ।

### **ऐनका उद्देश्यहरु:**

- बिद्वतीय कारोवारलाई परिभाषित गर्ने,
- बैंकिंग क्षेत्रमा बिद्वतीय उपकरणको प्रयोगलाई कानुनी मान्यता प्रदान गर्ने,
- बिद्वतीय उपकरणको प्रयोगबाट बिद्वतीय कारोवार गर्ने प्रकृया निर्धारण गर्ने,
- बैंक वित्तीय संस्था प्रति सर्वासधारणको विश्वासनियता अभिवृद्धि
- सरल सक्षम र सुरक्षित भुक्तानी प्रणालीको विकास गर्ने,
- स्वस्थ प्रतिस्पर्धा र दीगो बैंकिंग विकास गर्ने,

- सरल सक्षम र सुरक्षित भुक्ताना प्रणालाका विकास गर्न,
- स्वस्थ प्रतिस्पर्धा र दीगो बैंकिंग विकास गर्ने,
- विधुतीय कारोवारलाई सरल र सुरक्षित गराउने,