E-commerce

Learning objectives

- Defining key terms, e-commerce, e-business, e-markets and distinguishing between them.
- Defining internet and understanding internet services.
- Understanding electronic commerce transactions.
- Understanding e-commerce history.
- Identifying the unique features of e-commerce technology.
- Understanding the types of ecommerce.

What is e-commerce?

- Electronic commerce (e-commerce, or EC) describes the buying, selling, and exchanging of products, services, and information via computer networks, primarily the Internet.

- E-commerce is the use of internet and the world wide web to transact business. More formally, digitally enabled commercial transactions between and among organizations and individuals.
- Each of these components of the definition of e-commerce is important.
- Digitally enabled transactions include all transactions mediated by digital technology. This means transactions that occur over the internet and the web.
- Commercial transactions involve the exchange of value (e.g., money) in return for products and services. Without an exchange of value no commerce occurs.

E-business

- **E-business (electronic business)** refers to a broad definition of EC, not just buying and selling, but also servicing customers, collaborating with business partners, and conducting electronic transactions within an organization.

E-markets

- E-markets are simply defined as Websites where buyers and sellers interact with each other and conduct transaction.

Internet

- The internet is a global network of interconnected networks. This includes millions of corporate, government, organizational, and private networks.
- Web 1.0 is the first generation of the internet technology and it connected people to networks.
- Web 2.0 is the second generation of the internet technology and includes:
  - Blogs
  - Social networking
  - Photo, video and bookmark sharing

- **Web.2.0 connected people with machines and each other.**
- **Web 2.0 is a set of applications and technologies that allows users to create, edit and distribute content, share preferences, bookmarks, participate in virtual lives and build online communities.**

The types of networks

- There are three types networks:

1. Public internet: The global network that is accessible by anyone, anywhere, anytime.
2. Intranet: A network that runs internally in a corporation. It is a private network accessible only to an organization's staff. E.g. Oxford University intranet. Samsung intranet, British airways intranet, etc.
3. Extranet: It is a controlled private network that allows access to partners, suppliers or an authorized set of customers – normally to a subset of the information. E.g. Samsung extranet. BMW extranet, etc.

The internet services

The internet provides several services such as:

5. Discussion groups

4. Internet telephones

3. Chat

2. Electronic mail (E-Mail)

1. World wide web

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- **World wide web:** it is an information system on the Internet which allows documents to be connected to other documents by hypertext links, enabling the user to search for information by moving from one document to another.
- Although the term internet and the web are often used interchangeably, they are actually two different things.
- The internet is the world wide network of computer networks (global networks of interconnected networks).
- Web is one of the internet most popular service providing access to billion of web pages.

2. Electronic mail (E-Mail): it is the most used system in the internet. Millions of messages are daily travelling in the vast horizon of the internet. It is just like an international postal system. In addition to messages, it is possible to send database, vocal records, graphics, programs.

3. Chat: it displays a direct message in front of another person or group of people who will reply to the message directly through chatting includes talking. It also depends widely on writing.

4. Internet telephones: are used to call any telephone number in any place around the world, through the computer by special software and by using a sound and microphone and speaker

5. Discussion groups: it is a collection of dialogue groups where the internet users may send their messages or notes and wait for the answers.

Electronic Commerce Transactions

- In Electronic Commerce Transactions:
- The purchaser can:
  - Select products from a web site.
  - Request approvals and forward orders to purchasing via electronic processes.
- The seller can:
  - Add orders to database.
  - Check warehouse inventory and customer status.
  - Arrange delivery.
  - Handle communications all via electronic commerce.

E-commerce history

- The inception of the Internet can be traced back to the 1960s, when the Advanced Research Projects Agency Computer Network (ARPANET), the pioneer to the Internet, was established for research in high technology areas.
- The term Internet actually did not come into use until 1982.
- By the end of the 1980s, the Internet had still maintained its noncommercial nature and the primary users were still scientists and engineers working for the government or for universities.
- In the early 1990s, internet became usable for ordinary people without sophisticated understanding of computer science and techniques.

- **Web pages and browsers appeared in 1993 and the number of internet user was increased.**
- **With the increasing number of Internet users, the Internet became attractive to the business world and the first generation of e-business was like a gold rush.**
- **In 1992: CompuServe (the first major commercial online service provider in the United States) offers online retail products to its customers. This gives people the first chance to buy things off their computer.**
- **In 1995, two of the biggest names in e-commerce are launched: Amazon.com and eBay.com**

The unique features of e-commerce technology

1. **Ubiquity**: the internet /web technology is available every where at home and elsewhere via mobile devices anytime.

- **The business significance of ubiquity feature include:**
  - Marketplace removed from temporal, geographic locations to become "marketspace".
  - Customer convenience is enhanced.
  - Shopping costs are reduced.

2. Social technology

- Social technology: the internet and e-commerce technology have evolved to be much more social by allowing users to create and share content in the form of text, videos, music and photos.
- The business significance of social technology feature:
    - The technology promotes user content generation and social networking.

3. Global reach

- **Global reach**, the e-commerce technology permits commercial transactions to cross national boundaries, around the earth.
- The business significance of global reach feature include:
  - Commerce is enabled across cultural and national boundaries without modifications.
  - Market-space includes potentially billions of consumers and billions of business worldwide.

4. Universal standards

- Universal standards: the technical standards for conducting e-commerce are universal standards, they are shared by all nations around the world.
- The business significance of universal standard of the internet:
  - Reduces market entry costs for merchants.
  - Reduces search costs for consumers.
  - Makes price discovery simpler, faster and more accurate.

5. Richness

- Richness: information richness refers to the complexity and content of a message.
- The business significance of richness feature.
  - It is possible to deliver rich messages with text, audio, and video simultaneously to large numbers of people.

6. Interactivity

- **Interactivity**: the technology works through interaction with the user. It allows for two way communication between merchant and consumer.
- **The business significance of interactivity feature:**
  - Consumers engaged in dialog that dynamically adjusts experience to the individual.
  - Consumer becomes co-participant in process of delivering goods to market.

7. Information density

- **Information density**: the total amount and quality of information available to all market participants.
- **The business significance of information density:**
  - Information costs are reduced.
  - Information becomes plentiful, cheap, and accurate.
  - It enables greater price transparency.

8. Personalization/Customization

- Personalization: e-commerce allows personalization in which merchants can target their marketing message to specific individuals by adjusting the message to a person's name, interest and past purchase.
- Customization: e-commerce also allows customization which involves changing the delivered product or service based on a user's preference or prior behaviour.
- The business significance of personalization/customization feature:
  - Personalized messages can be sent to individuals as well as groups.
  - Products and services can be customized to individual preferences.

Electronic Commerce Applications

- Direct marketing
- Stocks
- Online banking
- Procurement and purchasing
- Auctions
- Travel
- Online publishing
- Customer Services

Types of e-commerce

1. Business-to-consumers (B2C) e-commerce.
2. Business to business (B2B) e-commerce.
3. Consumer to consumer (C2C) e-commerce.
4. Business-to-government (B2G) e- commerce.
5. Mobile commerce (M commerce).

1. Business-to-consumers (B2C) e-commerce

- Business-to-consumers (B2C) e-commerce: commercial transactions between an organization and consumers. It is the second largest form of e-commerce.
- B2C e-commerce:
  - Reduces transactions costs (particularly search costs) by increasing consumer access to information and allowing consumers to find the most competitive price for a product or service.
  - Reduces market entry barriers since the cost of putting up and maintaining a website is much cheaper than installing a "brick-and-mortar" structure for a firm.
- Business-to-consumers (B2C) business model involve portals, online retailers, content providers, transaction brokers, service providers. Example of B2C is Amazon

2. Business to business (B2B) e-commerce

- B2B e-commerce involves that two or more businesses make transactions or collaborate electronically.
- B2B e-commerce is simply defined as e-commerce between companies. It is also online businesses selling to other businesses.
- In B2B, companies conduct business with their suppliers, distributors, and other partners through electronic networks.
- There are two primary business models used within B2B ecommerce: (e-distribution, e-procurement companies).

B2B applications

- **B2B is the largest form of e-commerce. Most B2B applications are in the areas of supplier management (especially purchase order processing), inventory management, distribution management, channel management and payment management (e.g., electronic payment systems).**
- **Some common examples of B2B models are IBM, HP.**

3. Consumer to consumer (C2C) e-commerce

- Consumer to consumer e-commerce: it is a commerce between consumers in which consumer interact with another consumer online.
- C2C e-commerce involves that an individual (consumer) sells products (or services) to other individuals (consumers) with the help of an online market maker such as the auction site ebay.
- C2C e-commerce is a type of trade relations where both sellers and buyers are consumers, not businesses.
- Outstanding example of C2C e-commerce sites is e-Bay.

- The benefits of consumer to consumer ecommerce is that consumers can get reduction in costs, sellers and buyers are reachable.
- The disadvantages represented by the lack of quality control, there is no guarantee that the purchased item is of high quality or worth the money paid. Moreover, parties stop their cooperation after a transaction is completed.

4. Business-to-government (B2G) e- commerce

- **Business-to-government e-commerce** is generally defined as commerce between companies and the public sector. It refers to the use of the Internet for public procurement, licensing procedures, and other government-related operations.
- Example, business pay taxes, sell goods and services to governments agents.

5. Mobile commerce

- Mobile commerce (m-commerce) refers to the online transactions and communications conducted using mobile devices such as smartphones and tablets, and typically with a wireless connection.
- Mobile commerce involves to the use of wireless digital devices to enable transactions on the web.
- Once connected, mobile consumers can conduct transactions, including, banking, travel reservations and more