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LECTURE 13: E–COMMERCE

LEARNING OUTCOMES

Students, after mastering materials of the present lecture, should be able

1. to identify several advantages of e-commerce
2. to outline a multistage model that describes how e-commerce works
3. to identify some of the major challenges that companies must overcome to succeed in e-commerce
4. to describe some of the current uses and potential benefits of e-commerce
5. to identify several e-commerce applications

LECTURE OUTLINE

1. INTRODUCTION
2. EC CONSIDERATION
3. TYPES OF E-COMMERCE
4. E-COMMERCE APPLICATION
6. STRATEGIES FOR SUCCESSFUL EC

INTRODUCTION

1. Definition

- E-commerce is a new way of conducting business, and, as with any other new application of technology, it presents both opportunities for improvement and potential problems.

- E-commerce (electronic commerce or EC) can be defined as
  - the buying and selling of goods and services, or the transmitting of funds or data, over an electronic network, primarily the internet.
  - technology-mediated exchanges between parties (individuals and/or organizations) as well as the electronically based intra- or interorganizational activities that facilitate such exchanges.

- The terms e-commerce and e-business are often used interchangeably.

● Electronic commerce was identified as the facilitation of commercial transactions electronically, using technology such as Electronic Data Interchange (EDI) and Electronic Funds Transfer (EFT).

- **EDI** is the structured transmission of data between organizations by electronic means. It is used to transfer electronic documents or business data from one computer system to another computer system.

- **EFT** is the electronic exchange or transfer of money from one account to another.

2. History of E-Commerce

● The beginnings of e-commerce can be traced to the 1960s, when businesses started using Electronic Data Interchange (EDI) to share business documents with other companies.

● In 1979, the American National Standards Institute developed ASC X12 as a universal standard for businesses to share documents through electronic networks.

  ● After the number of individual users sharing electronic documents with each other grew in the 1980s, in the 1990s the rise of eBay and Amazon revolutionized the e-commerce industry.

● Consumers can now purchase endless amounts of items online, both from typical brick and mortar stores with e-commerce capabilities and one another.

- The growth and acceptance of credit cards, automated teller machines (ATM) and telephone banking in the 1980s were also forms of electronic commerce.
- Another form of E-Commerce was the airline reservation system: for example Sabre in the USA, Travicom in the UK, and Traveloka in Indonesia.

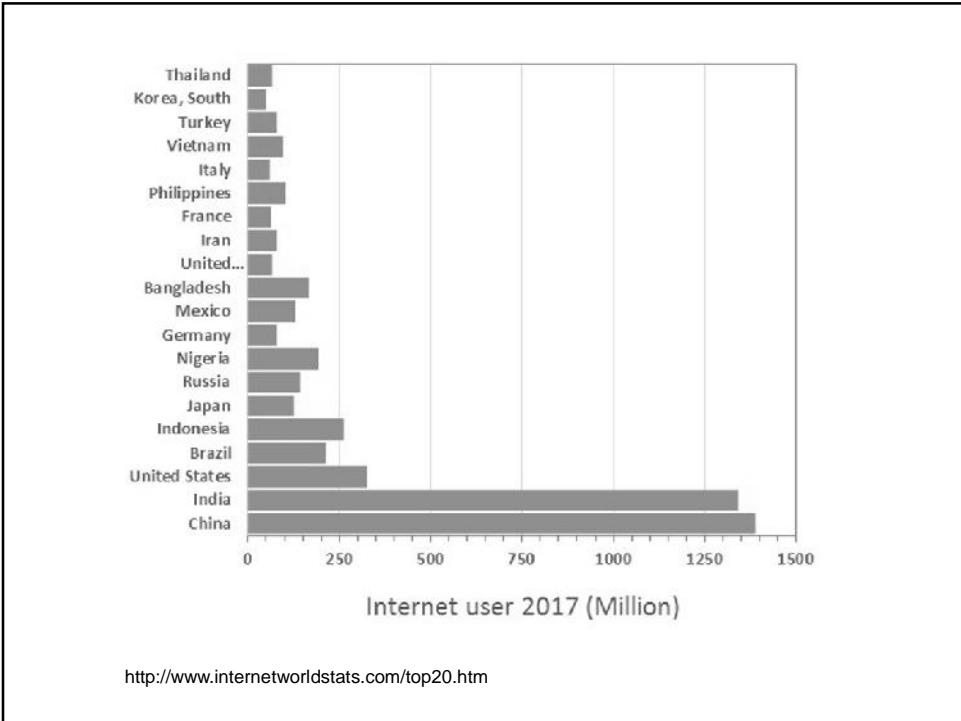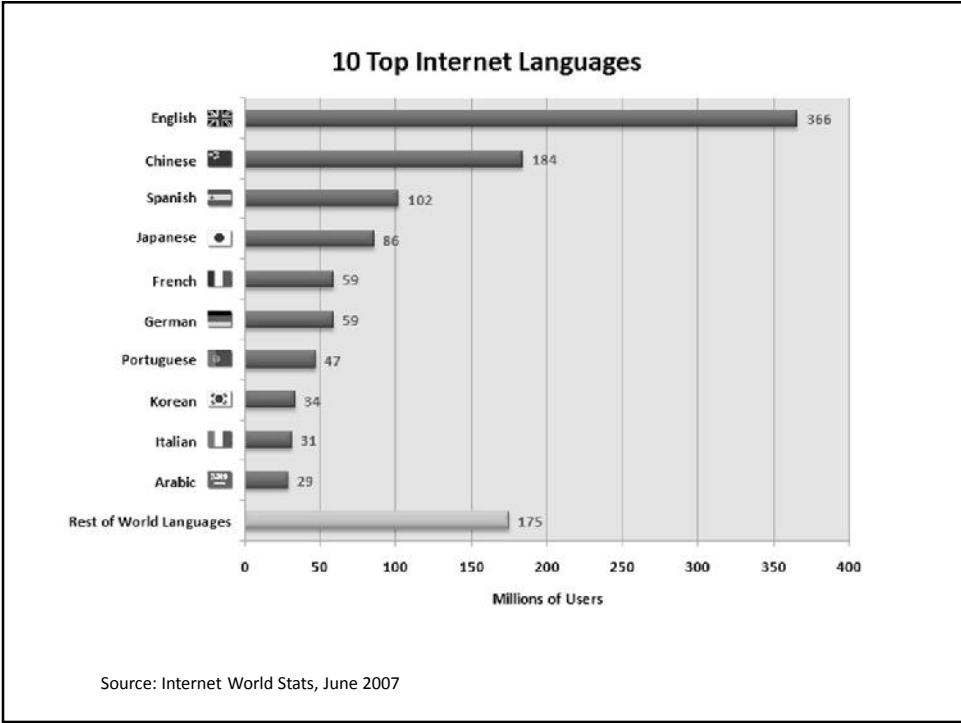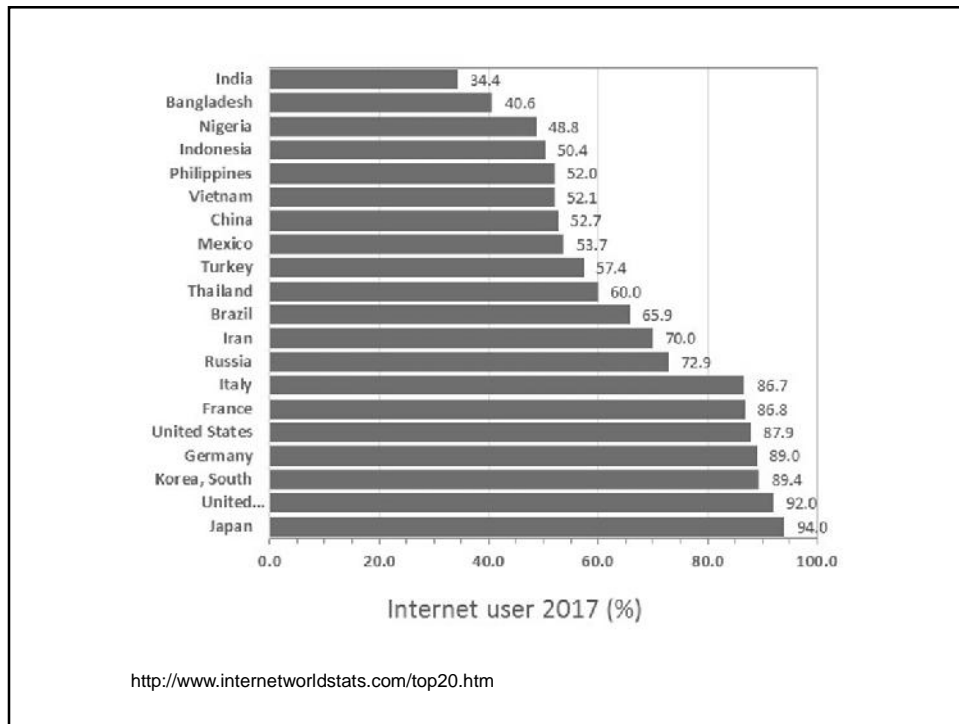Figure 2 Forecast: US Online And Web-Influenced Retail Sales, 2009 To 2014

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10 Top Internet Languages

Language	Millions of Users
English	366
Chinese	184
Spanish	102
Japanese	86
French	59
German	59
Portuguese	47
Korean	34
Italian	31
Arabic	29
Rest of World Languages	175

Source: Internet World Stats, June 2007

Internet user 2017 (Million)

Thailand, Korea South, Turkey, Vietnam, Italy, Philippines, France, Iran, United..., Bangladesh, Mexico, Germany, Nigeria, Russia, Japan, Indonesia, Brazil, United States, India, China

http://www.internetworldstats.com/top20.htm

Internet user 2017 (%)

http://www.internetworldstats.com/top20.htm

2. EC CONSIDERATION

1. Advantages of E-Commerce

- Faster buying/selling procedure, as well as easy to find products.
- Buying/selling 24/7.
- Low operational costs and better quality of services.
- Easy to start and manage a business.
- No need of physical company set-ups.
- Customers can easily select products from different providers without moving around physically.

2. Disadvantages of E-Commerce

- There is no guarantee of product quality.
- There are many hackers who look for opportunities, and thus an ecommerce site, service, payment gateways, all are always prone to attack.

3. Multistage Model for E-commerce

- Search and identification
- Selection and negotiation
- Purchasing products and services electronically
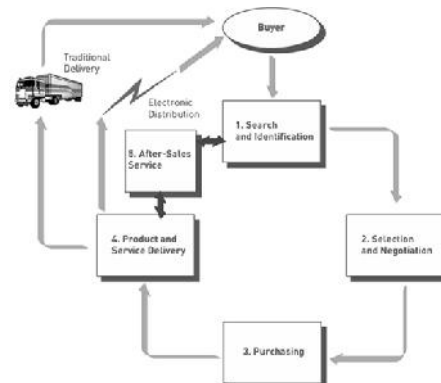- Product and service delivery
- After-sales service

Figure 8.1: Multistage Model for E-Commerce (B2B and B2C)

4. E-Commerce Challenges

- Define an effective e-commerce model and strategy.
- Need to change distribution systems and work processes.
- Integrate Web-based order processing with traditional systems.

Content
Industry news
Economic news
Stock prices

Commerce
Consumers and
businesses buying
and selling

Community
Message boards
Chat rooms

Figure 8.3: Three Basic Components of a Successful E-Commerce Model

Customer

Internet

Company's e-commerce Web server

Supports Web-based order processing

Corporate intranet

Provides access to corporate data

Company's mainframe computer

Production planning data
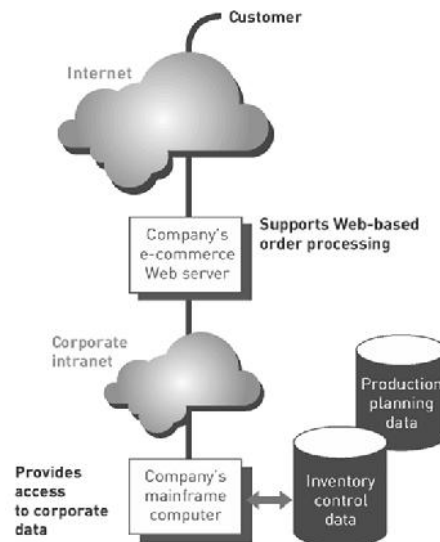
Inventory control data

Figure 8.4: Web-Based Order Processing Must Be Linked to Traditional Back-End Systems

5. E-Commerce Supply Chain

● Supply chain management is a key value chain composed of:
  - Demand planning
  - Supply planning
 - Demand fulfillment

Figure 8.5: Supply Chain Management

● E-commerce supply chain management allows businesses an opportunity to achieve:
  - Increased revenues and decreased costs
  - Improved customer satisfaction
  - Inventory reduction across the supply chain

3. TYPES OF E-COMMERCE

1. **Business-to-Consumer (B2C) e-commerce:** customers deal directly with the organization, avoiding any intermediaries.

2. **Business-to-Business (B2B) e-commerce:** participants are organizations.

3. **Consumer-to-Consumer (C2C) e-commerce:** participants are individuals, with one serving as the buyer and the other as the seller.

4. **Consumer-to-Business (C2B) e-commerce:** a **business** model in which **consumers** (individuals) create value and **businesses** consume that value.

1. Business-to-Business (B2B) E-Commerce

- **Business to business** is a type of transaction that exists between **businesses**, such as one involving a manufacturer and wholesaler, or a wholesaler and a retailer.

- **Business to business**
  - Allows manufacturers to buy at a low cost worldwide
  - Enterprises can sell to a global market
  - Offers great promise for developing countries
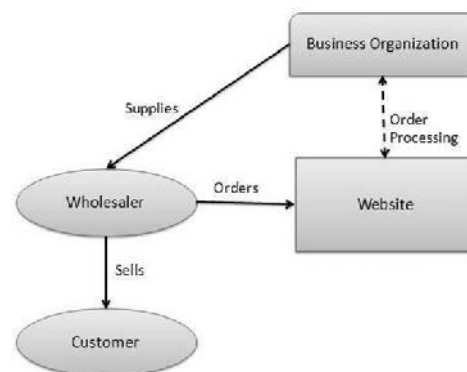
2. Business-to-Consumer (B2C) E-Commerce

- **Business to consumer** (**B2C**) is **business** or transactions conducted directly between a company and **consumers** who are the end-users of its products or services.
- The **business-to-consumer** is characterized by
  - Convenience.
  - Many goods and services are cheaper when purchased via the Web.
  - Comparison shopping.
  - **Disintermediation:** elimination of intermediate organizations between the producer and the consumer.
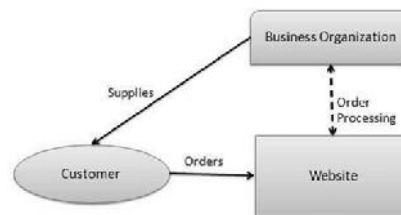
3. Consumer-to-Consumer (C2C) E-Commerce

- Often done through Web auction sites such as eBay
- Growth of C2C is responsible for reducing the use of the classified pages of newspapers to advertise and sell personal items.

3. Consumer-to-Consumer (C2C) E-Commerce

- This is a business model where an end user or consumer makes a product or service that an organization uses to complete a business process or gain competitive advantage.
- The C2B methodology completely transposes the traditional business-to-consumer (B2C) model, where a business produces services and products for consumer consumption.

4. E-COMMERCE APPLICATION

1. Retail and Wholesale

- **Electronic retailing (e-tailing):** the direct sale from business to consumer through electronic storefronts, typically designed around an electronic catalog and shopping cart model.
- **Cybermall:** a single Web site that offers many products and services at one Internet location.
- Manufacturing, repair, and operations (MRO) goods and services.

2. Manufacturing

- To raise profitability and improve customer service, many manufacturers move their supply chain operations onto the Internet.

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- **Electronic exchange:** an electronic forum where manufacturers, suppliers, and competitors buy and sell goods, trade market information, and run back-office operations.

3. Marketing

- **Market segmentation:** the identification of specific markets to target them with advertising messages.
- **Technology-enabled relationship management:** use of detailed information about a customer's behavior, preferences, needs, and buying patterns to set prices, negotiate terms, tailor promotions, add product features, and otherwise customize the entire relationship with that customer.

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Figure 8.6: Model of an Electronic Exchange

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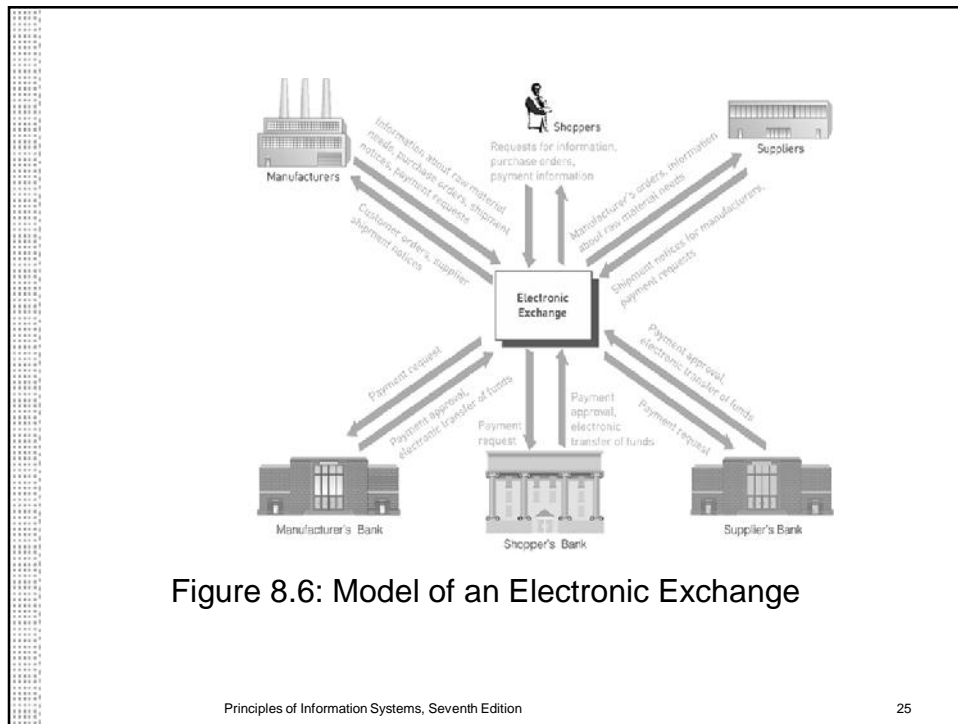
4. Investment and Finance
- Online stock trading.
- Online banking.

5. Hardware
- Storage capacity and computing power required of the Web server depends on:
  - Software that will run on the server.
  - Volume of e-commerce transactions.
- Website hosting.

6. Web Server Software
- Security and identification
  - Web sites must be designed to protect against attacks.
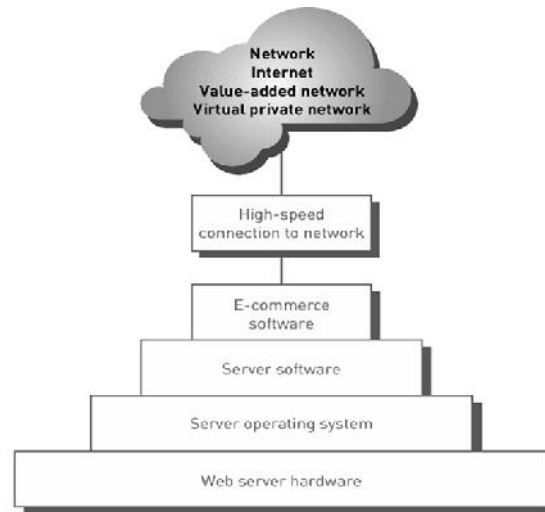 - Denial-of-service (DOS) attack.

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Figure 8.7: Key Technology Infrastructure Components

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- Retrieving and sending Web pages.
- Web site tracking.
- Web site development
- Web page construction
  - Static Web page
  - Dynamic Web page

7. E-Commerce Software
- Catalog management.
- Product configuration.
- Shopping cart facilities.
- E-commerce transaction processing.
- Web traffic data analysis.

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Figure 8.8: Electronic Shopping Cart

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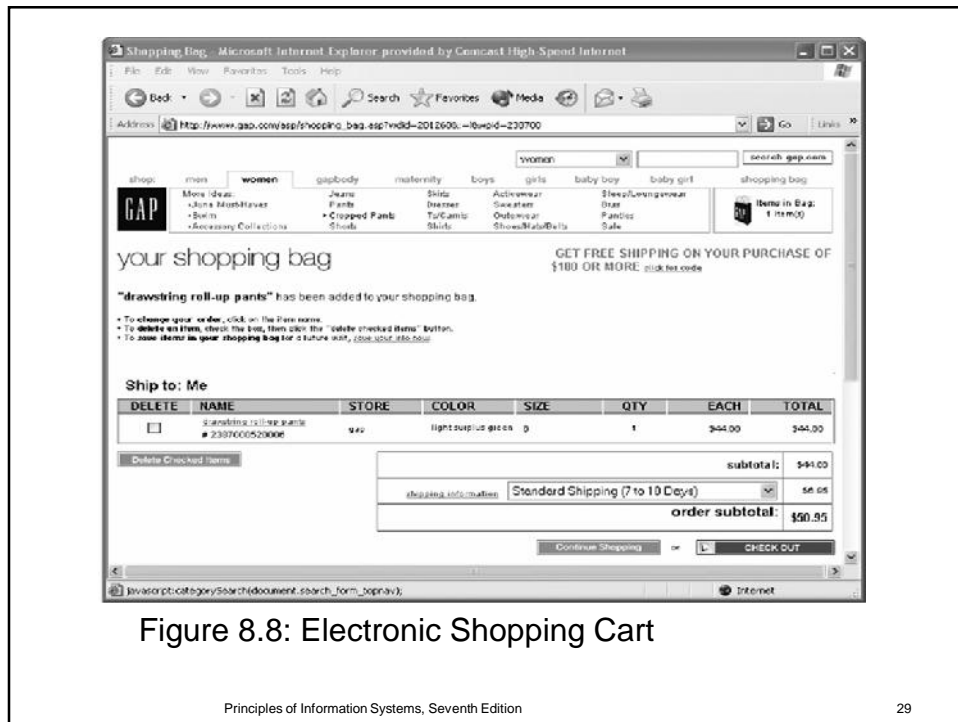
5. STRATEGIES FOR SUCCESSFUL EC

1. DEVELOPING AN EFFECTIVE WEB PRESENCE

- Decide which tasks the site must accomplish.
- An effective Web site creates an attractive presence and meets the needs of its visitors.
- It may be necessary to redefine your site's business model to capture new business opportunities.

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2. Putting up a Web Site

- **Web site hosting companies:** companies that provide the tools and services required to set up a Web page and conduct e-commerce within a matter of days and with little up-front cost.

- **Storefront broker:** companies that act as middlemen between your Web site and online merchants that have the products and retail expertise.

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3. Building Traffic to Your Web Site

- Obtain and register a domain name
- Make your site search-engine-friendly
  - **Meta tag**: a special HTML tag, not visible on the displayed Web page, that contains keywords representing your site's content, which search engines use to build indexes pointing to your Web site
- Web site traffic data analysis software

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4. Maintaining and Improving Your Web Site

- Be alert to new trends and developments in e-commerce
- Be prepared to take advantage of new opportunities
- **Personalization:** the process of tailoring Web pages to specifically target individual consumers
  - Explicit
  - Implicit

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