



CHAPTER 10

**E-commerce: Digital Markets,
Digital Goods**

LEARNING OBJECTIVES

- 1. What are the unique features of e-commerce, digital markets, and digital goods?**
- 2. What are the principal e-commerce business and revenue models?**
- 3. How has e-commerce transformed marketing?**
- 4. How has e-commerce affected business-to-business transactions?**
- 5. What is the role of mobile commerce in business and what are the most important m-commerce applications?**
- 6. What issues must be addressed when building an e-commerce Web site?**

E-COMMERCE AND THE INTERNET

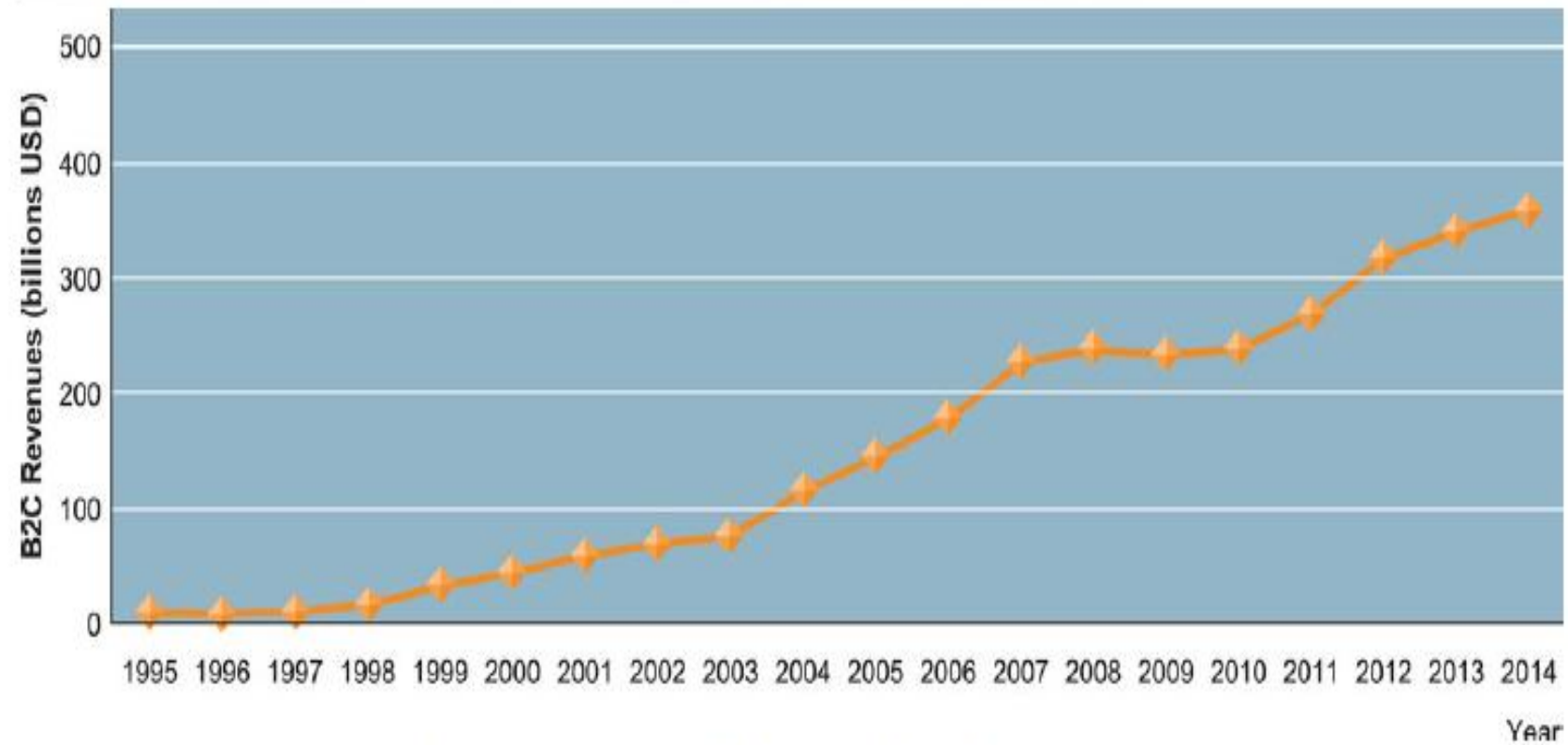
- Have you ever purchased music over the Web or streamed a movie?
- Have you ever used the Web to search for information about your sneakers before you bought them in a retail store? If so, you've participated in e-commerce.
- In 2010, 133 million adult Americans bought something online, as did millions of others worldwide. And although most purchases still take place through traditional channels, e-commerce continues to grow rapidly and to transform the way many companies do business.
- In 2010, e-commerce represents about 6 percent of all retail sales in the United States, and is growing at 12 percent annually (eMarketer, 2010a).

E-COMMERCE TODAY

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.

- By 2006, e-commerce revenues returned to solid growth, and have continued to be the fastest growing form of retail trade in the United States, Europe, and Asia.

FIGURE 10-1 THE GROWTH OF E-COMMERCE



Retail e-commerce revenues grew 15–25 percent per year until the recession of 2008–2009, when they slowed measurably. In 2010, e-commerce revenues are growing again at an estimated 12 percent annually.

Why? Growth

→ **Online consumer sales grew** to an estimated \$225 billion in 2010, an increase of more than 12 percent over 2009 (including travel services and digital downloads), with 133 million people purchasing online and 162 million shopping and gathering information but not necessarily purchasing (eMarketer, 2010a).

→ The number of individuals of all ages online in the United States expanded to 221 million in 2010, up from 147 million in 2004. In the world, **over 1.9 billion people are now connected to the Internet. Growth in the overall Internet population has spurred growth in e-commerce (eMarketer, 2010b).**

→ Approximately **80 million households have broadband access to the Internet in 2010**, representing about 68 percent of all households.

→About 83 million Americans now access **the Internet using a smartphone such as an iPhone, Droid, or BlackBerry**. Mobile e-commerce has begun a rapid growth based on apps, ring tones, downloaded entertainment, and location-based services. In a few years, mobile phones will be the most common Internet access device.

→**B2B e-commerce**-use of the Internet for business-to-business commerce and collaboration among business partners expanded to more than \$3.6 trillion

Source: wiki

- **Business-to-business (B2B)** describes commerce transactions between businesses, such as between a [manufacturer](#) and a [wholesaler](#), or between a wholesaler and a retailer. Contrasting terms are business-to-consumer ([B2C](#)) and business-to-government ([B2G](#)). **B2B branding** is a term used in [marketing](#).
- The overall volume of B2B (Business-to-Business) transactions is much higher than the volume of B2C transactions. The primary reason for this is that in a typical [supply chain](#) there will be many B2B transactions involving sub components or [raw materials](#), and only one B2C transaction, specifically sale of the finished product to the end customer. For example, an automobile manufacturer makes several B2B transactions such as buying tires, glass for windshields, and rubber hoses for its vehicles. The final transaction, a finished vehicle sold to the consumer, is a single ([B2C](#)) transaction.

WHY E-COMMERCE IS DIFFERENT

- Table on next slide will describes the **unique features of the Internet and Web** as a commercial medium.

- BUSINESS TRANSFORMATION

→ E-commerce remains the **fastest growing form** of commerce when compared to physical retail stores, services, and entertainment.

→ The **first wave** of e-commerce transformed the business world of books, music, and air travel. In the **second wave**, nine new industries are facing a similar transformation scenario: marketing and advertising, telecommunications, movies, television, jewelry and luxury goods, real estate, online travel, bill payments, and software.

→ The breadth of **e-commerce offerings grows, especially in the services economy of social networking, travel, information clearinghouses, entertainment, retail apparel, appliances, and home furnishings.**

→ The online demographics of shoppers broaden to match that of ordinary shoppers.

→ Small businesses and entrepreneurs continue to flood the e-commerce marketplace, often riding on the infrastructures created by industry giants, such as Amazon, Apple, and Google, and increasingly taking advantage of cloud-based computing resources.

→ Mobile e-commerce begins to take off in the United States with location-based services and entertainment downloads including e-books.

TECHNOLOGY FOUNDATIONS

- **Wireless Internet connections** (Wi-Fi, WiMax, and 3G/4G smart phones) grow rapidly.
- Powerful **handheld mobile** devices support music, Web surfing, and entertainment as well as voice communication. Podcasting and streaming take off as mediums for distribution of video, radio, and user-generated content.
- The **Internet broadband foundation** becomes stronger in households and businesses as transmission prices fall. More than 80 million households had broadband cable or DSL access to the Internet in 2010, about 68 percent of all households in the United States (eMarketer, 2010a).
- **Social networking software** and **sites such as Facebook, MySpace, Twitter, LinkedIn, and thousands of others become a major new platform for e-commerce, marketing, and advertising.** Facebook hits 500 million users worldwide, and 180 million in the United States (comScore, 2010).
- New Internet-based models of computing, such as **cloud computing, software as a service (SaaS), and Web 2.0 software** greatly reduce the cost of e-commerce Web sites.

NEW BUSINESS MODELS EMERGE

→ **More than half the Internet user population have joined an online social network**, contribute to social bookmarking sites, create blogs, and share photos. Together these sites create a massive online audience as large as television that is attractive to marketers.

→ The **traditional advertising business model is severely disrupted** as Google and other technology players such as Microsoft and Yahoo! seek to dominate online advertising, and expand into offline ad brokerage for television and newspapers. (which are the disruptive technologies here???)

→ **Newspapers and other traditional media adopt online**, interactive models but are losing advertising revenues to the online players despite gaining online readers.

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EIGHT UNIQUE FEATURES OF E-COMMERCE TECHNOLOGY

E-commerce Technology Dimension

Business Significance

Ubiquity. Internet/Web technology is available everywhere: at work, at home, and elsewhere via mobile devices.

The marketplace is extended beyond traditional boundaries and is removed from a temporal and geographic location. "Marketspace" anytime, is created; shopping can take place anywhere. Customer convenience is enhanced, and shopping costs are reduced.

Global reach. The technology reaches across national boundaries, around the Earth.

Commerce is enabled across cultural and national boundaries seamlessly and without modification. The marketspace includes, potentially, billions of consumers and millions of businesses worldwide.

Universal standards. There is one set of technology standards, namely Internet standards.

With one set of technical standards across the globe, disparate computer systems can easily communicate with each other.

Richness. Video, audio, and text messages are possible.

Video, audio, and text marketing messages are integrated into a single marketing message and consumer experience.

Interactivity. 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 co-participant in the process of delivering goods to the market.

Information Density. The technology reduces information costs and raises quality.

Information processing, storage, and communication costs drop dramatically, whereas currency, accuracy, and timeliness improve greatly. Information becomes plentiful, cheap, and more accurate.

Personalization/Customization. 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.

Social technology. User content generation and social networking.

New Internet social and business models enable user content creation and distribution, and support social networks.

KEY CONCEPTS IN E-COMMERCE: DIGITAL MARKET AND DIGITAL GOODS IN A GLOBAL MARKETPLACE

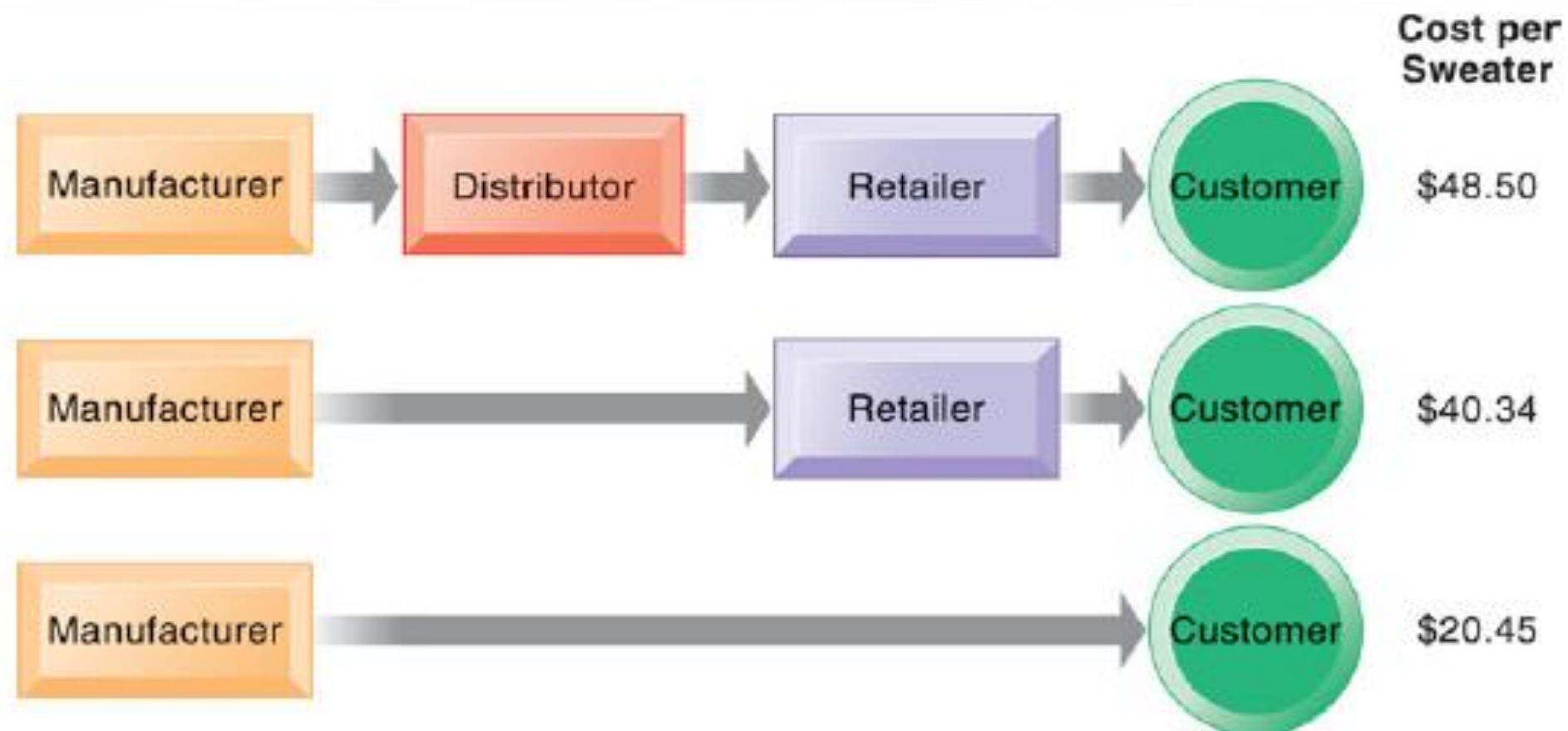
- The Internet has created a digital marketplace where millions of people all over the world are able **to exchange massive amounts of information directly, instantly, and for free. As a result, the Internet has changed the way companies conduct business and increased their global reach.**

- The Internet reduces information asymmetry. An **information asymmetry** exists when one party in a transaction has more information that is important for the transaction than the other party.
- In digital markets, consumers and suppliers can “see” the prices being charged for goods, and in that **sense digital markets are said to be more “transparent” than traditional markets.**

- Digital markets are very flexible and efficient because they operate with reduced search and transaction costs, lower **menu costs** (*merchants' costs of changing prices*), greater price discrimination, and the ability to change prices dynamically based on market conditions.
- In **dynamic pricing**, the price of a product varies depending on the demand characteristics of the customer or the supply situation of the seller.

- By selling directly to consumers or reducing the number of intermediaries, companies are able to raise profits while charging lower prices. The removal of organizations or business process layers responsible for intermediary steps in a value chain is called **disintermediation**

FIGURE 10-2 THE BENEFITS OF DISINTERMEDIATION TO THE CONSUMER



The typical distribution channel has several intermediary layers, each of which adds to the final cost of a product, such as a sweater. Removing layers lowers the final cost to the consumer.

- Digital markets provide many opportunities to sell directly to the consumer, bypassing intermediaries, such as distributors or retail outlets.
- Eliminating intermediaries in the distribution channel can significantly lower purchase transaction costs

TABLE 10-3 DIGITAL MARKETS COMPARED TO TRADITIONAL MARKETS

	DIGITAL MARKETS	TRADITIONAL MARKETS
Information asymmetry	Asymmetry reduced	Asymmetry high
Search costs	Low	High
Transaction costs	Low (sometimes virtually nothing)	High (time, travel)
Delayed gratification	High (or lower in the case of a digital good)	Lower: purchase now
Menu costs	Low	High
Dynamic pricing	Low cost, instant	High cost, delayed
Price discrimination	Low cost, instant	High cost, delayed
Market segmentation	Low cost, moderate precision	High cost, less precision
Switching costs	Higher/lower (depending on product characteristics)	High
Network effects	Strong	Weaker
Disintermediation	More possible/likely	Less possible/unlikely

Gratification: especially when gained from the satisfaction of after purchasing the e-goods.

Disintermediation: reduction in the use of intermediaries between producers and consumers, for example by investing directly in the securities market rather than through a bank.

Digital Goods

- The Internet digital marketplace has greatly expanded sales of digital goods. **Digital goods** are goods *that can be delivered over a digital network.*
- Music tracks, video, Hollywood movies, software, newspapers, magazines, and books can all be expressed, stored, delivered, and sold as purely digital products.
- Currently, most of these products are sold as physical goods, for example, CDs, DVDs, newspapers, and hard-copy books.
- But the Internet offers the possibility of delivering all these products on demand as digital products

Communication and social n/w:-

E-COMMERCE: BUSINESS AND TECHNOLOGY

TYPES OF E-COMMERCE:-

- There are many ways to classify electronic commerce transactions. One is by looking at the nature of the participants in the electronic commerce transaction. The three major electronic commerce categories are **business-to-consumer (B2C)** e-commerce, **business-to-business (B2B)** e-commerce, and **consumer-to consumer (C2C)** e-commerce.

Business-to-consumer (B2C) electronic commerce involves retailing products and services to individual shoppers.

BarnesandNoble.com, which sells books, software, and music to individual consumers, is an example of B2C e-commerce.

Business-to-business (B2B) electronic commerce involves sales of goods and services among businesses.

ChemConnect's Web site for buying and selling chemicals and plastics is an example of B2B e-commerce.

Consumer-to-consumer (C2C) electronic commerce involves consumers selling directly to consumers.

For example, eBay, the giant Web auction site, enables people to sell their goods to other consumers by auctioning their merchandise off to the highest bidder, or for a fixed price. Craigslist is the most widely used platform used by consumers to buy from and sell directly to others.

E-COMMERCE BUSINESS MODELS

→ Changes in the economics of information described earlier have created the conditions for entirely new business models to appear, while destroying older business models.

Table (on next slide) describes some of the most important Internet business models that have emerged.

All, in one way or another, use the Internet to add extra value to existing products and services or to provide the foundation for new products and services.

CATEGORY	DESCRIPTION	EXAMPLES
E-tailer	Sells physical products directly to consumers or to individual businesses.	Amazon RedEnvelope.com
Transaction broker	Saves users money and time by processing online sales transactions and generating a fee each time a transaction occurs.	ETrade.com Expedia
Market creator	Provides a digital environment where buyers and sellers can meet, search for products, display products, and establish prices for those products. Can serve consumers or B2B e-commerce, generating revenue from transaction fees.	eBay Priceline.com ChemConnect.com

Content provider	Creates revenue by providing digital content, such as news, music, photos, or video, over the Web. The customer may pay to access the content, or revenue may be generated by selling advertising space.	WSJ.com GettyImages.com iTunes.com Games.com
Community provider	Provides an online meeting place where people with similar interests can communicate and find useful information.	Facebook MySpace iVillage , Twitter
Portal	Provides initial point of entry to the Web along with specialized content and other services.	Yahoo Bing Google
Service provider	Provides Web 2.0 applications such as photo sharing, video sharing, and user-generated content as services. Provides other services such as online data storage and backup.	Google Apps Photobucket.com Xdrive.com

[384]

Transaction Broker

- Sites that process transactions for consumers normally handled in person, by phone, or by mail are transaction brokers.
- The largest industries using this model are financial services and travel services.
The online transaction broker's primary value propositions are savings of money and time, as well as providing an extraordinary inventory of financial products and travel packages, in a single location.
- Online stock brokers and travel booking services charge fees that are considerably less than traditional versions of these services.

FIGURE 10-3 WEB SITE VISITOR TRACKING

Click 1

The shopper clicks on the home page. The store can tell that the shopper arrived from the Yahoo! portal at 2:30 PM (which might help determine staffing for customer service centers) and how long she lingered on the home page (which might indicate trouble navigating the site).

Click 2

Click 3

The shopper clicks on blouses, clicks to select a woman's white blouse, then clicks to view the same item in pink. The shopper clicks to select this item in a size 10 in pink and clicks to place it in her shopping cart. This information can help the store determine which sizes and colors are most popular.

Click 4

Click 5

From the shopping cart page, the shopper clicks to close the browser to leave the Web site without purchasing the blouse. This action could indicate the shopper changed her mind or that she had a problem with the Web site's checkout and payment process. Such behavior might signal that the Web site was not well designed.

Click 6

E-commerce Web sites have tools to track a shopper's every step through an online store. Close examination of customer behavior at a Web site selling women's clothing shows what the store might learn at each step and what actions it could take to increase sales.

FIGURE 10-4 WEB SITE PERSONALIZATION



Firms can create unique personalized Web pages that display content or ads for products or services of special interest to individual users, improving the customer experience and creating additional value.

Customer self service:-

In bank you can know what transaction you do (Kalupur bank)

Customer can review the flight arrival/departure time/seating charts...etc

B2B E-COMMERCE: NEW EFFICIENCIES AND RELATIONSHIPS

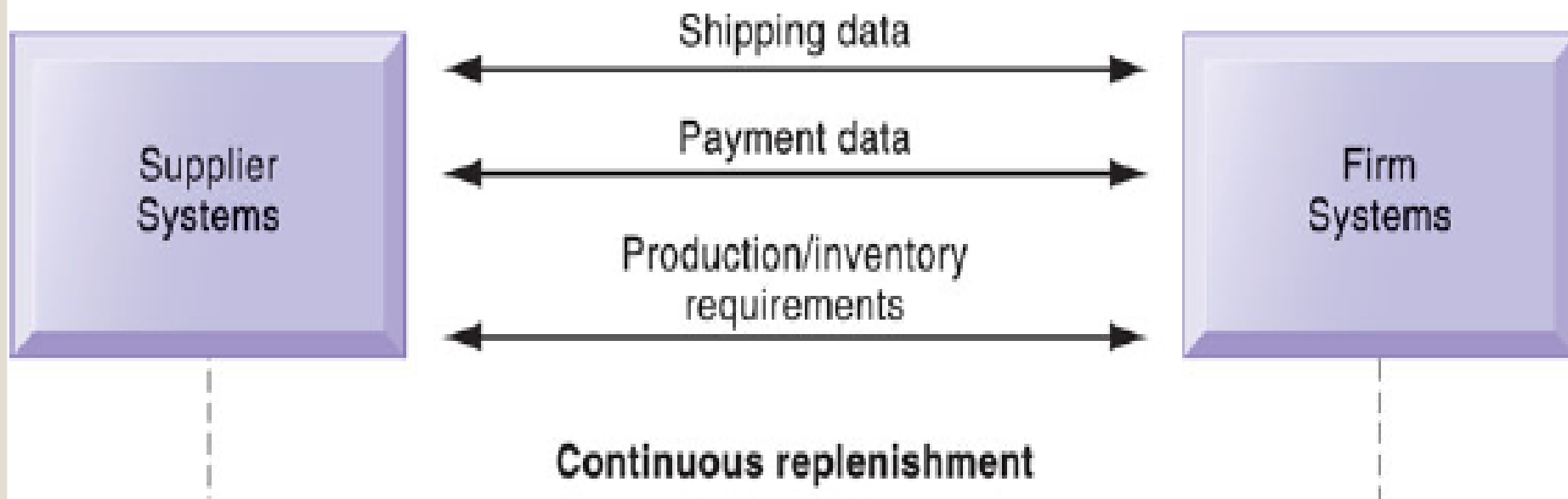
Business-to-business e-commerce refers to the commercial transactions that occur among business firms. Increasingly, these **transactions are flowing through a variety of different Internet-enabled mechanisms.**

About 80 percent of online B2B e-commerce is still based on proprietary systems for **electronic data interchange (EDI).**

Electronic data interchange enables the computer-to computer exchange between two organizations of standard transactions such as invoices, bills of lading, shipment schedules, or purchase orders.

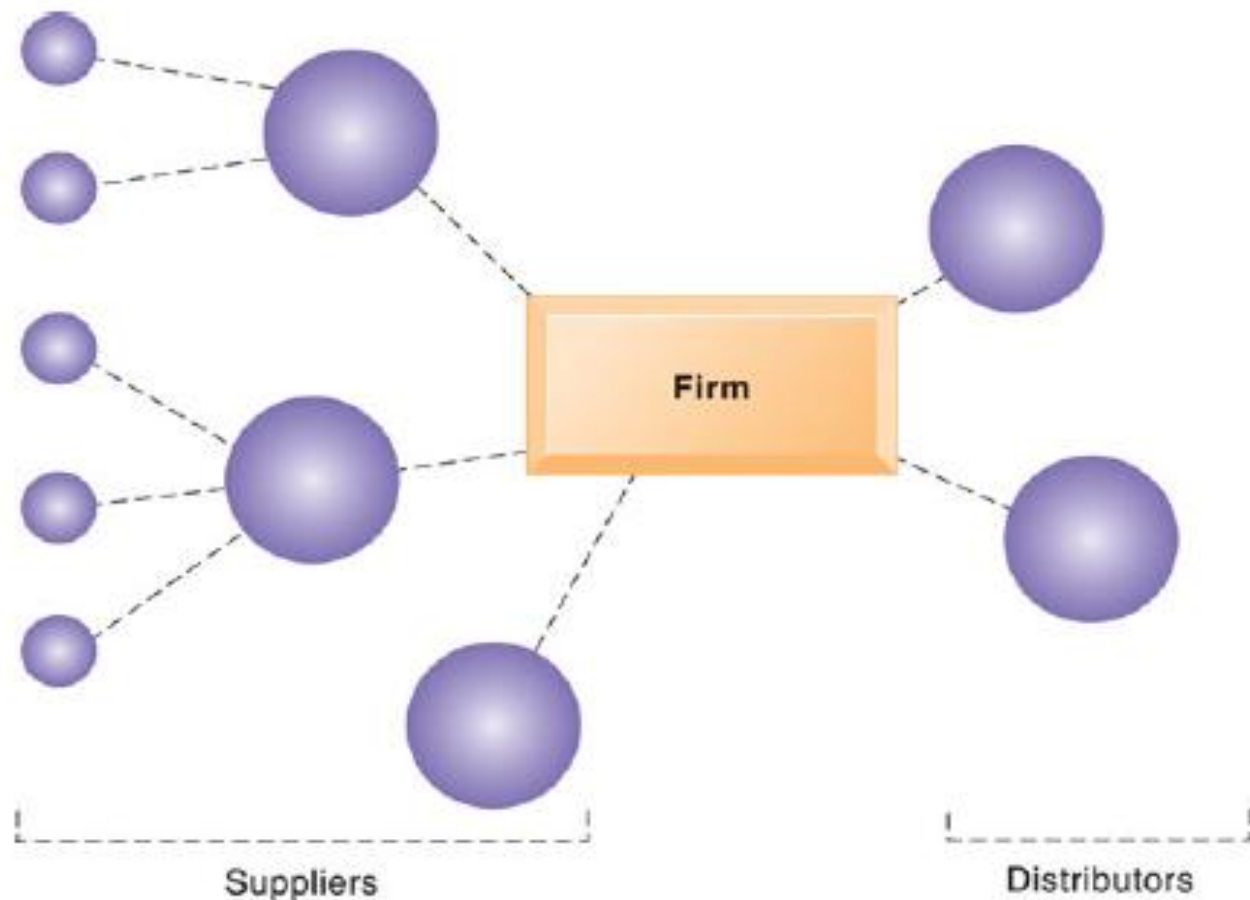
Transactions are automatically transmitted from one information system to another through a network, eliminating the printing and handling of paper at one end and the inputting of data at the other.

FIGURE 10-6 ELECTRONIC DATA INTERCHANGE (EDI)



Companies use EDI to automate transactions for B2B e-commerce and continuous inventory replenishment. Suppliers can automatically send data about shipments to purchasing firms. The purchasing firms can use EDI to provide production and inventory requirements and payment data to suppliers.

FIGURE 10-7 A PRIVATE INDUSTRIAL NETWORK



A private industrial network, also known as a private exchange, links a firm to its suppliers, distributors, and other key business partners for efficient supply chain management and other collaborative commerce activities.

FIGURE 10-8 A NET MARKETPLACE



Net marketplaces are online marketplaces where multiple buyers can purchase from multiple sellers.

- Exchanges: do it yourself exercise !

THE MOBILE DIGITAL PLATFORM AND MOBILE E-COMMERCE