

# **E-Commerce: Digital Markets, Digital Goods**

## **E-commerce and the Internet**

### **E-Commerce Today**

- **E-commerce: use of the Internet and Web to transact business; digitally enabled transactions.**
- **Began in 1995 and grew exponentially; still growing even in a recession.**
- **Companies that survived the dot-com bubble burst and now thrive.**

## E-commerce and the Internet

### The Growth of E-Commerce

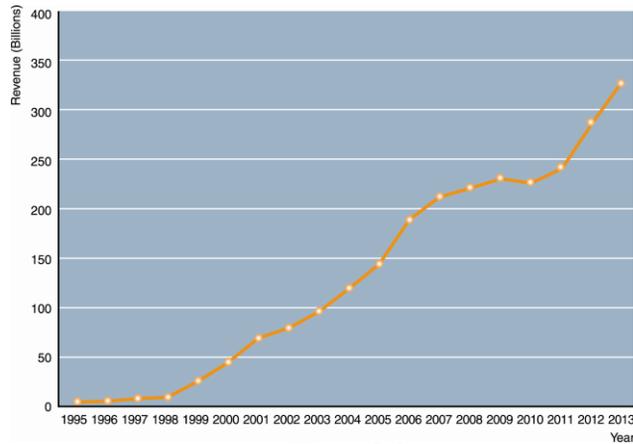


Figure 9-1

## E-commerce and the Internet

### Why E-Commerce Is Different

- **Ubiquity**
  - **Internet/Web technology available everywhere: work, home, and so on, anytime.**
  - **Effect:**
    - **Marketplace removed from temporal, geographic locations to become “marketspace”**
    - **Enhanced customer convenience and reduced shopping costs**

## E-commerce and the Internet

### Unique Features of E-commerce Technology

- **Global reach**
  - The technology reaches across national boundaries, around Earth
  - **Effect:**
    - Commerce enabled across cultural and national boundaries seamlessly and without modification.
    - Marketspace includes, potentially, billions of consumers and millions of businesses worldwide.

## E-commerce and the Internet

### Unique Features of E-commerce Technology

- **Universal standards**
  - One set of technology standards: Internet standards
  - **Effect:**
    - Disparate computer systems easily communicate with one another.
    - Lower **market entry costs**—costs merchants must pay to bring goods to market.
    - Lower consumers' **search costs**—effort required to find suitable products.

## E-commerce and the Internet

### Unique Features of E-commerce Technology

- **Richness**
  - **Supports video, audio, and text messages**
  - **Effect:**
    - **Possible to deliver rich messages with text, audio, and video simultaneously to large numbers of people.**
    - **Video, audio, and text marketing messages can be integrated into single marketing message and consumer experience.**

## E-commerce and the Internet

### Unique Features of E-commerce Technology

- **Interactivity**
  - **The technology works through interaction with the user**
  - **Effect:**
    - **Consumers engaged in dialog that dynamically adjusts experience to the individual.**
    - **Consumer becomes co-participant in process of delivering goods to market.**

## E-commerce and the Internet

### Unique Features of E-commerce Technology

- **Information density**
  - Large increases in **information density**—the total amount and quality of information available to all market participants
  - Effect:
    - Greater **price transparency**
    - Greater cost transparency
    - Enables merchants to engage in **price discrimination**

## E-commerce and the Internet

### Unique Features of E-commerce Technology

- **Personalization/Customization**
  - Technology permits modification of messages, goods
  - Effect:
    - Personalized messages can be sent to individuals as well as groups.
    - Products and services can be customized to individual preferences.

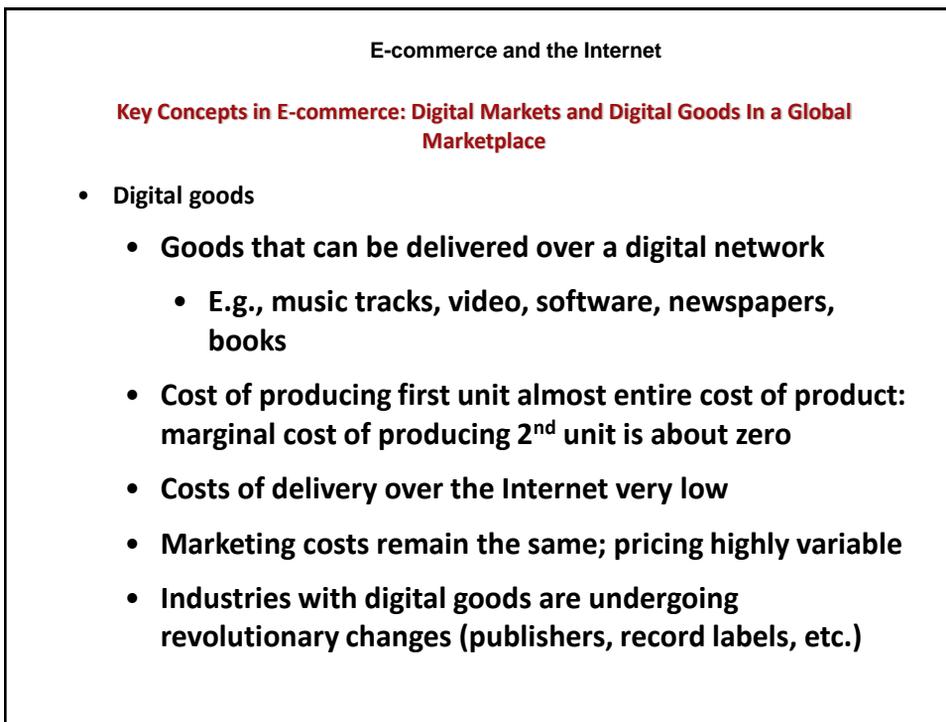
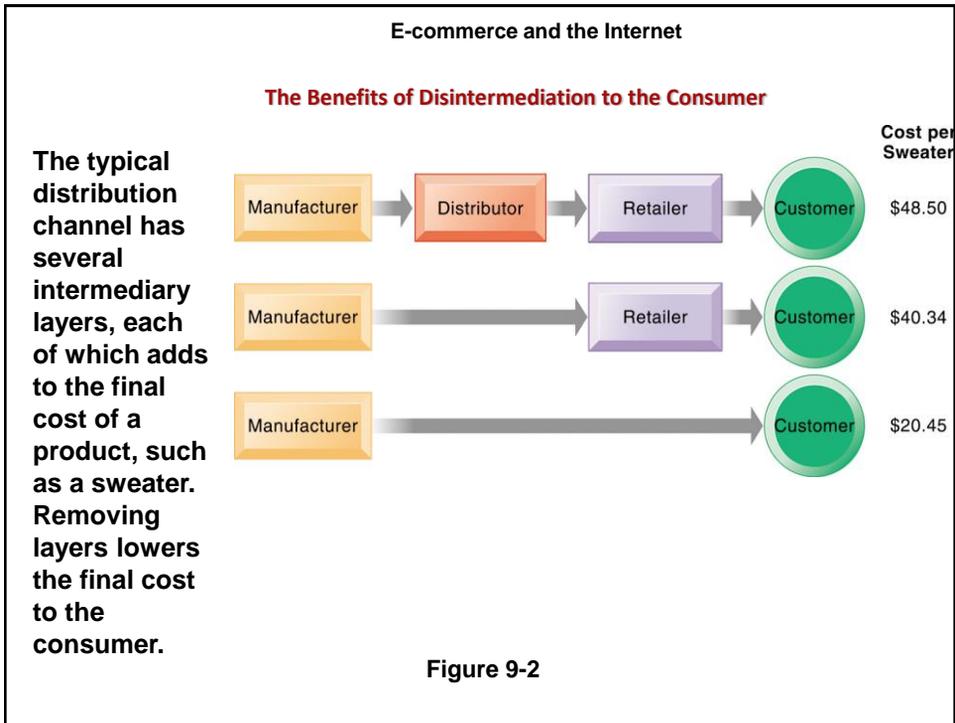
## E-commerce and the Internet

### Unique Features of E-commerce Technology

- **Social technology**
  - **The technology promotes user content generation and social networking**
  - **Effect:**
    - **New Internet social and business models enable user content creation and distribution, and support social networks.**

### Key Concepts in E-commerce: Digital Markets and Digital Goods In a Global Marketplace

- **Digital markets reduce**
  - **Information asymmetry** - when one party in a transaction has more information that is important for the transaction than the other party
  - **Search costs** - the effort to find suitable products
  - **Transaction costs** - the cost of participating in a market
  - **Menu costs** - merchants' costs of changing prices
- **Digital markets enable**
  - **Price discrimination** - selling the same goods, or nearly the same goods, to different targeted groups at different prices
  - **Dynamic pricing** - the price of a product varies depending on the demand characteristics of the customer or the supply situation of the seller
  - **Disintermediation** - the removal of organizations or business process layers responsible for intermediary steps in a value chain.



## E-commerce: Business and Technology

### Types of E-commerce

- **Business-to-consumer (B2C)**
- **Business-to-business (B2B)** [Grainger.com](http://Grainger.com)
- **Consumer-to-consumer (C2C)**
- **Mobile commerce (m-commerce)**
  - Use of wireless mobile devices for purchasing goods and services.
  - M-commerce is especially well-suited for location-based applications and services

## E-commerce: Business and Technology

### E-commerce Business Models

- **Portal** - revenue: advertising
- **E-tailer** – traditional sales over the web
- **Content provider** - revenue: access fees, advertising
- **Transaction broker** – eSchwab (charges for transaction)
- **Service provider** - revenue: subscription fees, advertising
- **Community provider** -

E-commerce: Business and Technology

**E-commerce Revenue Models**

- Advertising
- Sales
- Subscription
- Free/Fremium
- Transaction fee
- Affiliate

E-commerce: Business and Technology

**Web 2.0, Social Networking, and the Wisdom of Crowds**

- Most popular Web 2.0 service: social networking
  - Social networking sites sell banner ads, user preference information, and music, videos and e-books.
- Social shopping sites
  - Swap shopping ideas with friends (Kaboodle, ThisNext)
- Wisdom of crowds (crowd sourcing)
  - Large numbers of people can make better decisions about topics and products than a single person.
- Prediction markets: peer-to-peer betting markets on specific outcomes (elections, sales figures, designs for new products)
- LinkedIn is the largest professional and business social network that members often use to recruit employees and find jobs.

## E-commerce: Business and Technology

### E-commerce Marketing

- **Internet provides marketers with new ways of identifying and communicating with customers.**
- **Long tail marketing: ability to reach a large audience inexpensively.**
- **Behavioral targeting: tracking online behavior of individuals on thousands of Web sites.**
- **Advertising formats include search engine marketing, display ads, rich media, and e-mail.**
- **Collaborative filtering** - a method of making automatic predictions (filtering) about the interests of a user by collecting preferences from many users .The assumption is that if a person *A* has the same opinion as a person *B* on an issue, *A* is more likely to have *B*'s opinion on a different issue *x* than to have the opinion on *x* of a person chosen randomly

## E-commerce: Business and Technology

### Web Site Visitor Tracking (Clickstream)

**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.**

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

Click 4

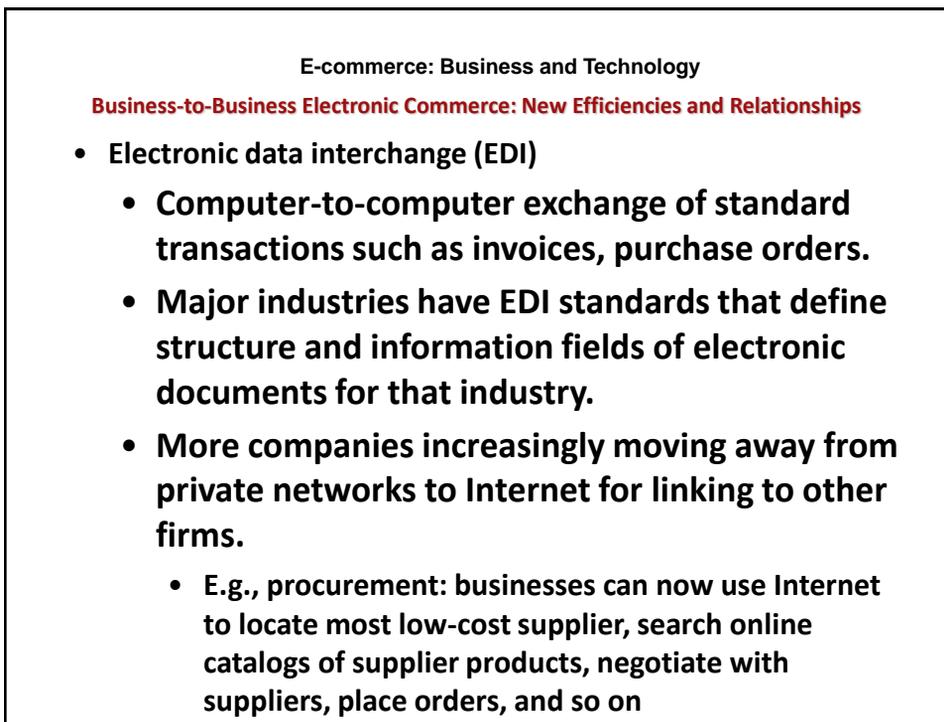
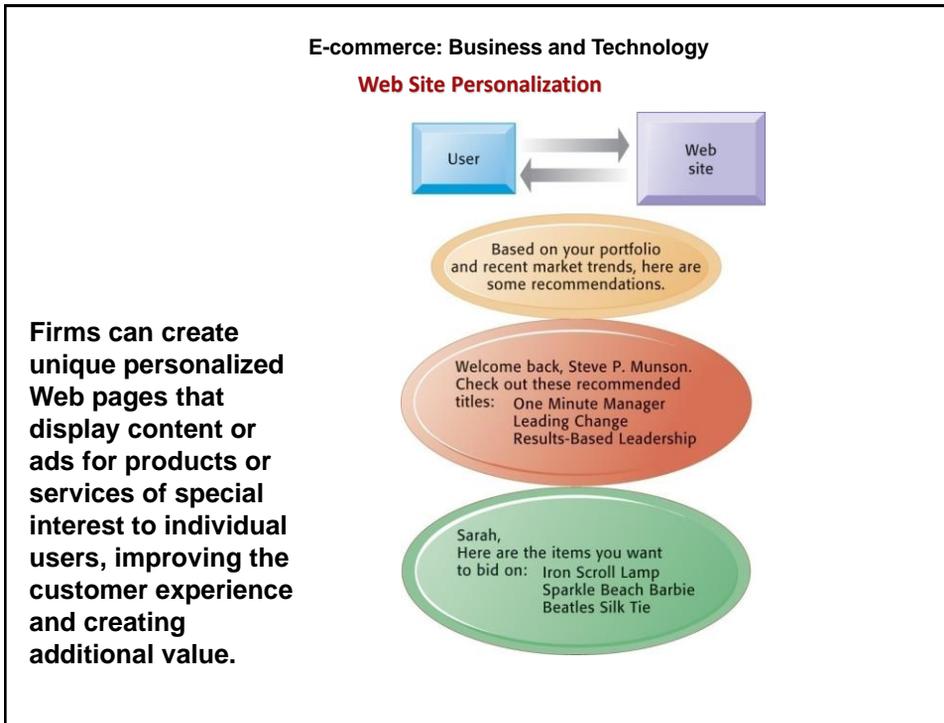
Click 5

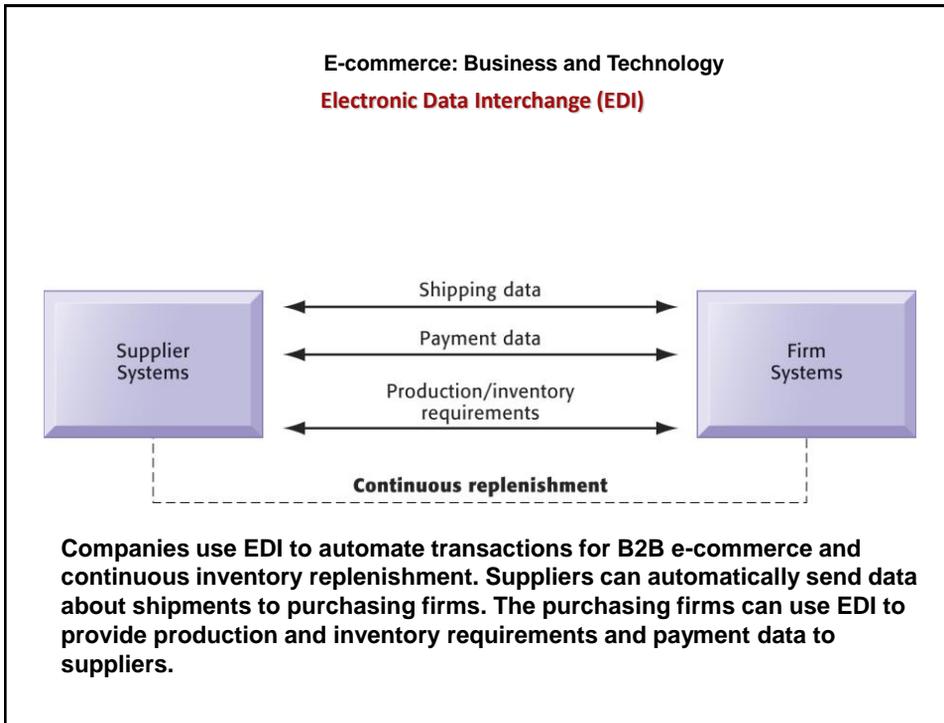
The shopper clicks on blouses, clicks to select a woman's white blouse, then clicks to view the same item in pink. The shopper clicks to select this item in a size 10 in pink and clicks to place it in her shopping cart. This information can help the store determine which sizes and colors are most popular.

Click 6

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.

**Extensive metrics exist for various types of user behavior, from the time spent on a Web page to the number of products ordered and placed in a shopping cart but not purchased.**





## E-commerce: Business and Technology

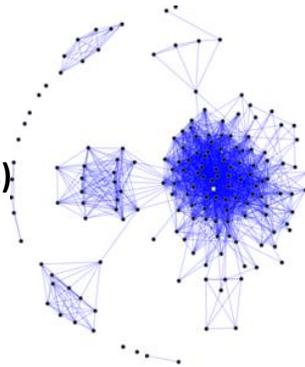
### Business-to-Business Electronic Commerce: New Efficiencies and Relationships

- Net marketplaces (e-hubs)
  - Single market for many buyers and sellers.
  - Industry-owned or owned by independent intermediary.
  - Generate revenue from transaction fees, other services.
  - Use prices established through negotiation, auction, RFQs, or fixed prices.
  - May focus on direct or indirect goods.
  - May be vertical or horizontal marketplaces.

## E-commerce: Business and Technology

- **Social e-commerce:**
  - Based on digital social graph
    - Mapping of all significant online relationships
- **Four features of social e-commerce driving its growth**
  - Social sign-on
  - Collaborative shopping
  - Network notification
  - Social search (recommendations)

A drawing of a [graph](#) in which each person is represented by a dot called [node](#) and the friendship relationship is represented by a line called edge



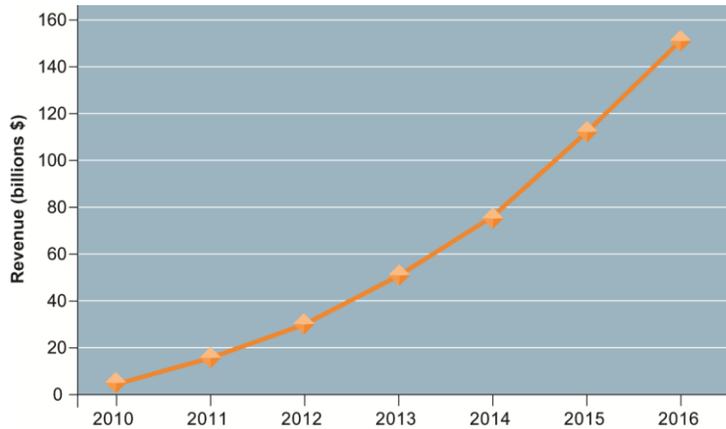
### E-commerce: Business and Technology

- **Social media:**
  - Fastest growing media for branding and marketing
- **Social network marketing:**
  - Seeks to leverage individuals influence over others in social graph
  - Target is a social network of people sharing interests and advice
  - Social networks have huge audiences
    - Facebook: 150 million U.S. visitors monthly
- **But companies are finding that old-school methods such as e-mail, display ads, and search engines are still the most cost effective tools for selling goods and services.**
- **Click-through rates on search ads are five times higher than ads on Facebook**
- **Generally, people do not go to Facebook to buy things and are not clicking on display ads (less than 2% of users).**

### The Mobile Digital Platform and Mobile E-commerce

- **M-commerce**
  - In 2012 is 10% of all e-commerce
  - Fastest growing form of e-commerce
    - Some areas growing at 50%
  - Four billion mobile phone users worldwide
  - Main areas of growth
    - Retail sales at top Mobile 400 (Amazon, eBay, etc.)
    - Sales of digital content (music, TV, etc.)
    - Local search for restaurants, museums, stores

### Consolidated Mobile Commerce Revenues



**Figure 10-9** Mobile e-commerce is the fastest growing type of B2C e-commerce although it represents only a small part of all e-commerce in 2011.

## Building an E-commerce Web Site

- **Pieces of the site-building puzzle**
  - **Assembling a team with the skills required to make decisions about:**
    - Technology
    - Site design
    - Social and information policies
    - Hardware, software, and telecommunications infrastructure
  - **Customer's demands should drive the site's technology and design.**

### Building an E-commerce Web Site

- **Business objectives**
  - The capabilities the site should have
    - Business decisions should drive technology
  - Example: execute a transaction payment
- **System functionality**
  - Technology needed to achieve objective
  - Example: a shopping cart or other payment system
- **Information requirement**
  - Specific data and processes needed
  - Example: secure credit card clearing, multiple payment options

### Building an E-commerce Web Site

- **Alternatives in building the Web site:**
  - **Completely in-house**
  - **Mixed responsibility**
  - **Completely outsourced**
    - Co-location
- **Web site budgets**
  - **Several thousand to millions per year**
  - **50% of budget is system maintenance and content creation**

