



# **E-commerce**

**business. technology. society.**

*Fifth Edition*

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# Chapter 1

## The Revolution Is Just Beginning

# **MySpace and Facebook: It's All About You**

## **Class Discussion**

- What was the idea behind the creation of MySpace?
- How is Facebook different from MySpace?
- Have you used MySpace or Facebook, and if so, how often? What was your experience?
- Do you think Facebook will overtake MySpace as the most popular social networking site in the United States?

# E-commerce Trends: 2008-2009

- New business models based on social technologies and user-generated content
- Search engine marketing challenges traditional marketing
- More and more people/businesses use Internet to conduct commerce
- Broadband and wireless Internet access growing
- Continued conflict over copyrights, content regulation, taxation, privacy, Internet fraud and abuse.

# What is E-commerce?

- Involves *digitally enabled commercial transactions* between and among organizations and individuals
  - *Digitally enabled transactions* include all transactions mediated by digital technology
  - *Commercial transactions* involve the exchange of value across organizational or individual boundaries in return for products or services

# E-commerce vs. E-business

- E-business:
  - Digital enablement of transactions and processes *within* a firm, involving information systems under firm's control
  - Does not include commercial transactions involving an exchange of value across organizational boundaries

# Why Study E-commerce?

- Technology is different and more powerful than other technologies
- Has challenged much traditional business thinking
- Has a number of unique features that help explain why we have so much interest in e-commerce

# Unique Features of E-commerce Technology

- Ubiquity
- Global reach
- Universal standards
- Information richness
- Interactivity
- Information density
- Personalization/customization
- Social technology

# Web 2.0

- The “new” Web
- Applications and technologies that allow users to:
  - create, edit, and distribute content
  - share preferences, bookmarks, and online personas
  - participate in virtual lives
  - Build online communities
- Examples
  - YouTube, Photobucket, Flickr
  - MySpace, Facebook, LinkedIn
  - Second Life
  - Wikipedia

# Types of E-commerce

- Classified by nature of market relationship
  - Business-to-Consumer (B2C)
  - Business-to-Business (B2B)
  - Consumer-to-Consumer (C2C)
- Classified by type of technology used
  - Peer-to-Peer (P2P)
  - Mobile commerce (M-commerce)

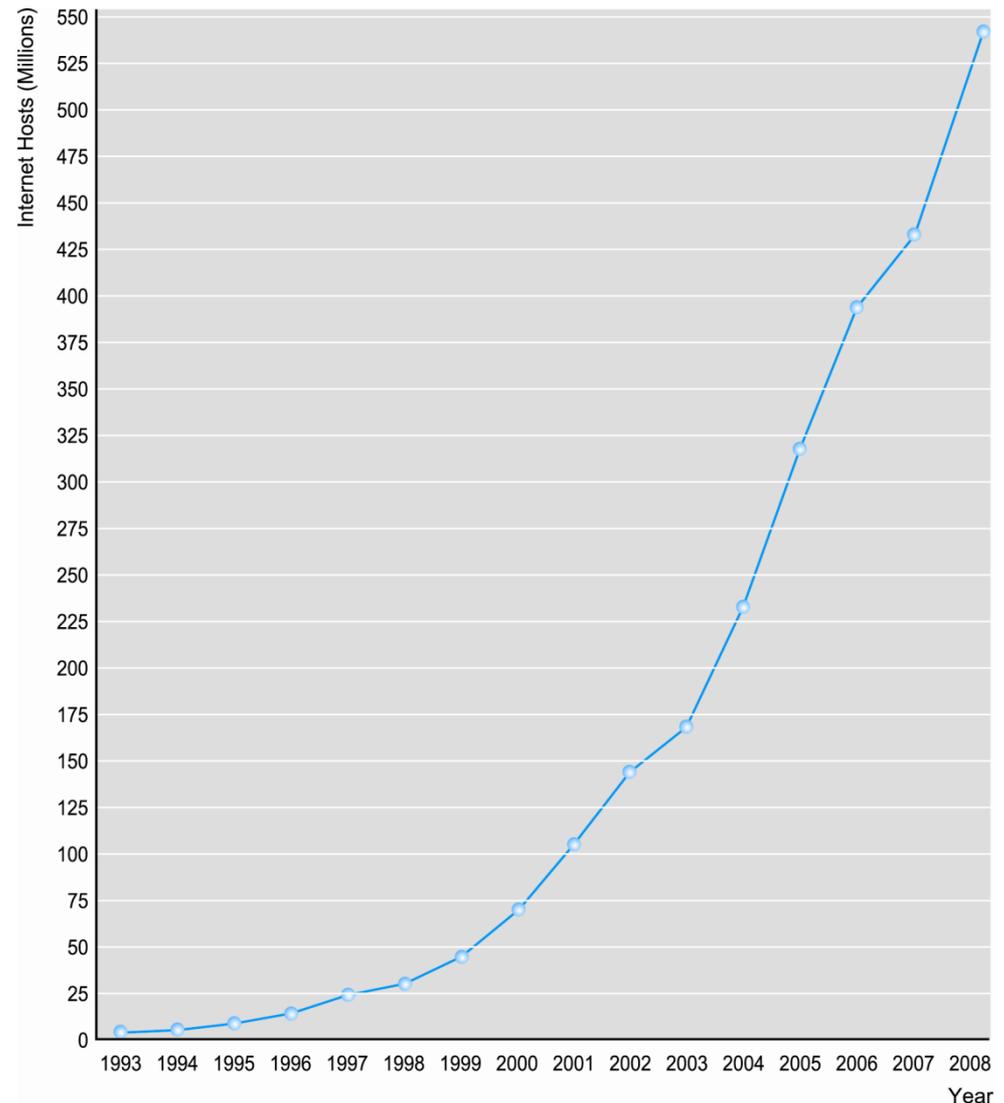
# The Internet

- Worldwide network of computer networks built on common standards
- Created in late 1960s
- Services include the Web, e-mail, file transfers, etc.
- Can measure growth by looking at number of Internet hosts with domain names

# The Growth of the Internet, Measured by Number of Internet Hosts with Domain Names

Figure 1.3, Page 23

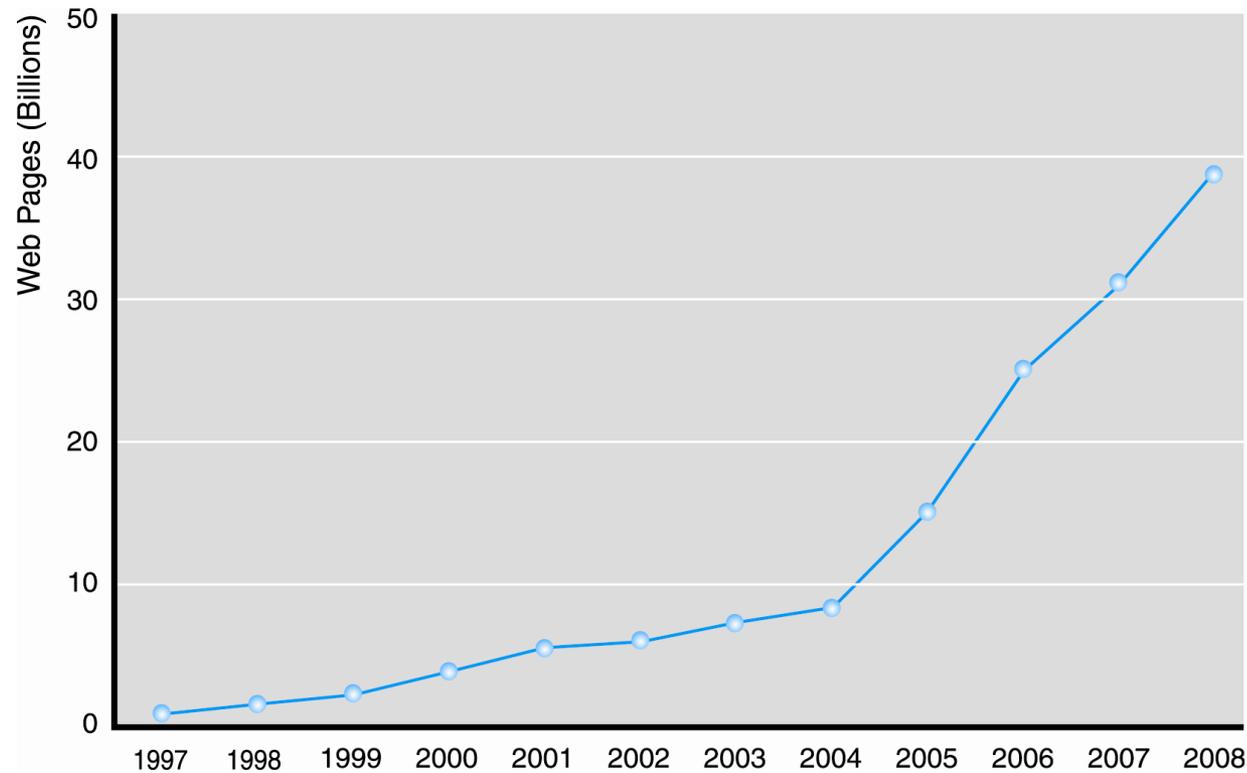
SOURCE: Internet Systems Consortium, Inc. , 2008.



# The Web

- Most popular service on the Internet
- Developed in early 1990s
- Provides access to Web pages (HTML documents)
- Can include text, graphics, animations, music, videos
- Web content has grown exponentially, from around 2 billion Web pages in 2000 to around 40 - 50 billion today

# The Growth of Web Content



**Figure 1.4, Page 24**

**SOURCE:** Google Inc., 2008; authors' estimates

*Insight on Technology:*  
**Spider Webs, Bow Ties, Scale-Free  
Networks, and the Deep Web**  
**Class Discussion**

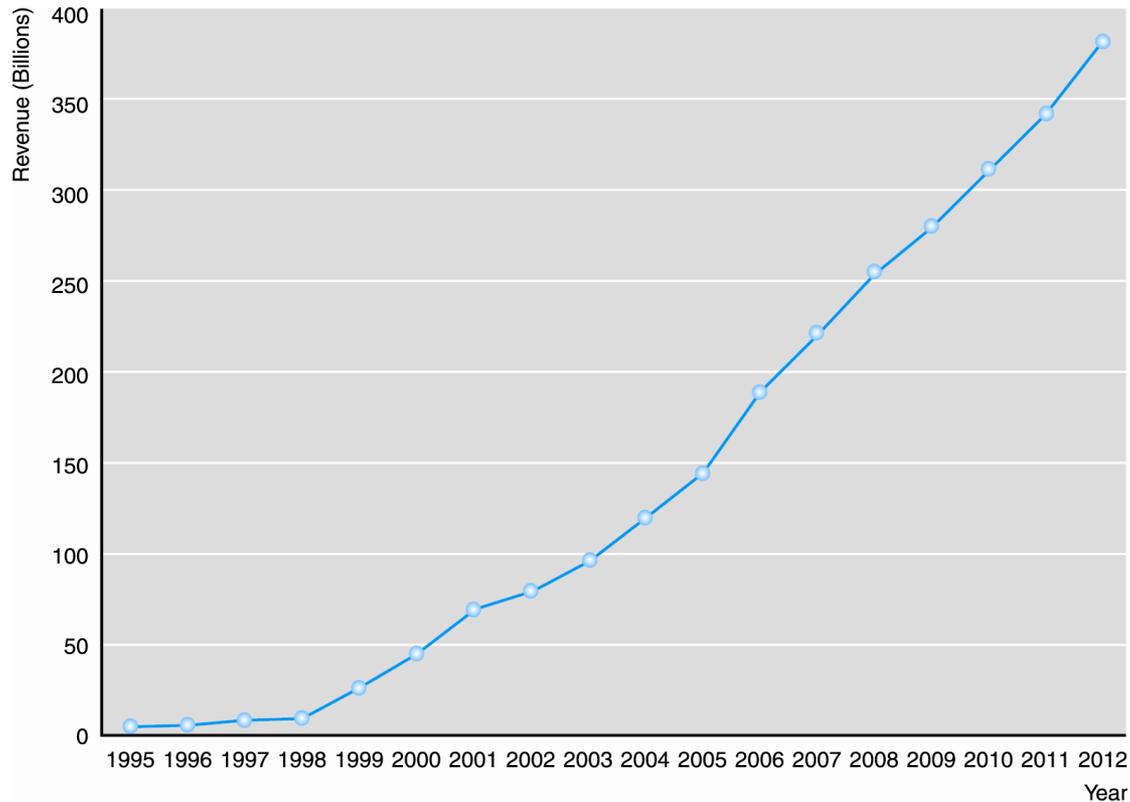
- What is the “small world” theory of the Web?
- What is the significance of the “bow-tie” form of the Web?
- Why does Barabasi call the Web a “scale-free network” with “very connected super nodes”?

# Origins and Growth of E-commerce

- Precursors:
  - Baxter Healthcare
  - Electronic Data Interchange (EDI)
  - French Minitel (1980s videotext system)
- None had functionality of Internet
- 1995: Beginning of e-commerce
  - First sales of banner advertisements
- Since then, e-commerce fastest growing form of commerce in U.S.

# The Growth of B2C E-commerce

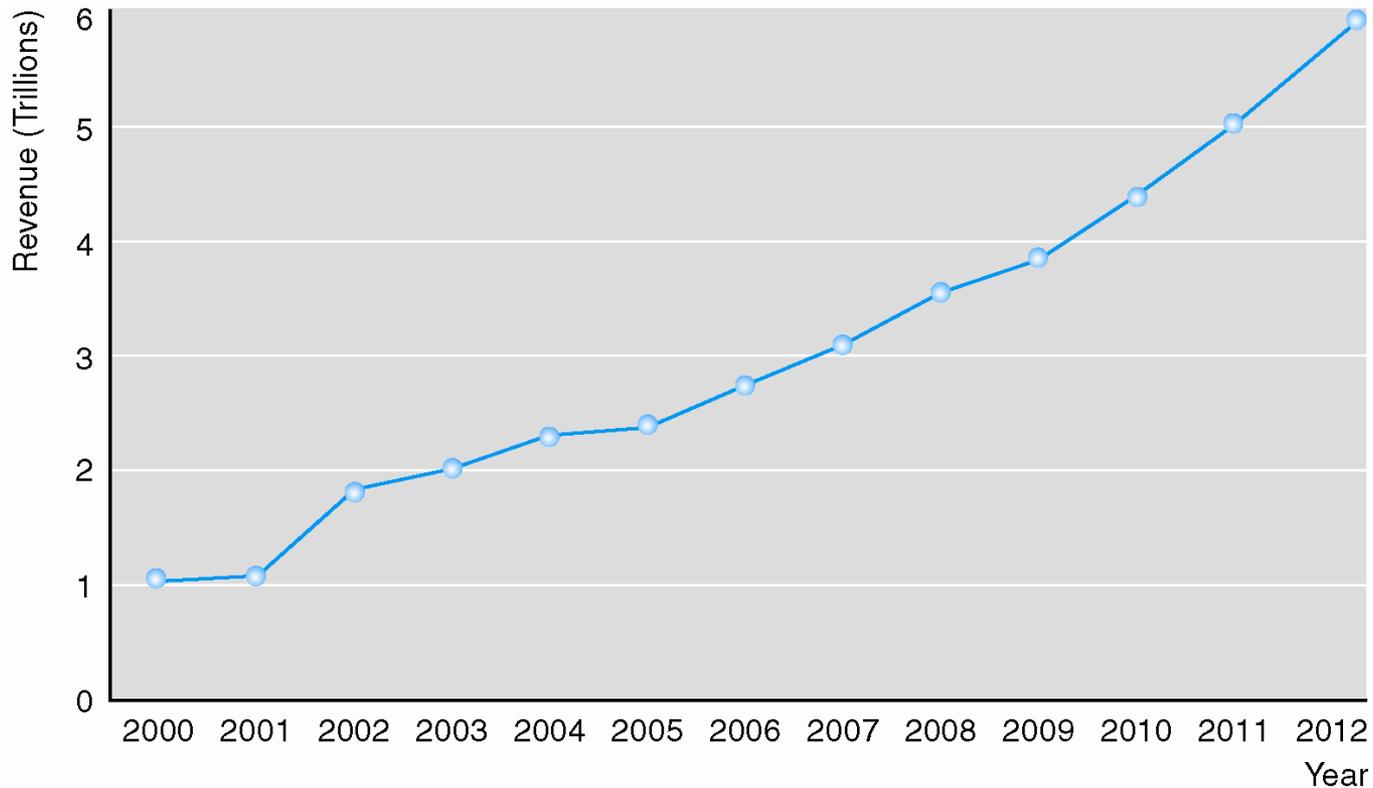
Figure 1.5, Page 25



**SOURCES:** eMarketer, Inc., 2008d; U.S. Census Bureau, 2008; authors' estimates.

# The Growth of B2B E-commerce

Figure 1.6, Page 28



**SOURCES:** U.S. Census Bureau, 2008; authors' estimates.

# Technology and E-commerce in Perspective

- The Internet and Web are just two of a long list of technologies, such as automobiles and radio, that have followed a similar historical path.
- Although e-commerce has grown explosively, eventually its growth will cap as it confronts its own fundamental limitations.

# Potential Limitations on the Growth of B2C E-commerce

- Expensive technology
- Sophisticated skill set
- Persistent cultural attraction of physical markets and traditional shopping experiences
- Persistent global inequality limiting access to telephones and computers
- Saturation and ceiling effects

# The Visions and Forces Behind E-commerce: 1995–2000

- Computer scientists: Envisioned an inexpensive, universal communications and computing environment accessible by all
- Economists: A nearly perfect competitive market and friction-free commerce
- For entrepreneurs, financial backers and marketing professionals: An extraordinary opportunity to earn far above normal returns on investment

*Insight on Business*  
**Dot-com Déjà Vu**  
**Class Discussion**

- What explains the rapid growth in private investment in e-commerce firms in the period 1998–2000? Was this investment irrational?
- Why do you think investors today would be interested in investing in or purchasing e-commerce companies? Would you invest in an e-commerce company today?
- What's happening today? Go to the PricewaterhouseCoopers MoneyTree Web site for the latest information:  
<http://www.pwcmoneytree.com/moneytree/index.jsp>

# Assessing E-commerce: Successes, Surprises and Failures

- Stunning technological success
- A mixed success from business perspective
- Many early visions not fulfilled
  - Friction-free commerce
    - Consumers less price-sensitive than expected
    - Considerable price dispersion remains
  - Perfect competition
    - Transaction costs still high
    - Intermediaries remain

# Predictions for the Future

- E-commerce technology will continue to propagate through all commercial activity
- E-commerce prices will rise to cover the real cost of doing business on the Web and pay investors reasonable rate of return
- E-commerce margins and profits will rise to levels more typical of all retailers
- Traditional Fortune 500 companies will play growing and dominant role
- Number of successful pure online companies will decline; most successful e-commerce firms will adopt mixed “clicks and bricks” strategies
- Growth of regulatory activity worldwide

# Understanding E-commerce: Organizing Themes

- Technology:
  - Development and mastery of digital computing and communications technology
- Business:
  - New technologies present businesses with new ways of organizing production and transacting business
- Society:
  - Intellectual property, individual privacy, public policy

# The Internet and the Evolution of Corporate Computing

Figure 1.10, Page 44

## COMPUTER TECHNOLOGY

Mainframe Computers  
1950 – 1975



Minicomputers  
1970 – 1980



Personal Computers  
1980 – Present



Local Area Networks  
Client/Server Computing  
1980 – Present



Enterprise - Wide Computing  
1990 – Present



Internet and World Wide Web  
1995 – Present



Mobile digital platform  
and Cloud Computing  
2006 – Present



## BUSINESS APPLICATION

Transaction automation  
Payroll  
Accounts receivable

Business function automation  
Marketing  
Human Resources  
Design

Desktop automation  
Word processing  
Spreadsheets  
Databases

Workgroup automation  
Document sharing  
Project management  
Messaging, e-mail

Enterprise-wide automation  
Resource planning systems  
Integrated finance-manufacturing systems  
Human resource planning

Industrial system automation  
Supply chain management  
Customer relationship management  
Channel management systems  
Web services

Software and  
Hardware services  
Collaboration  
Social networking  
Integration of devices

## *Insight on Society*

# **Holding On to Your Privacy Online**

## **Class Discussion**

- What techniques of privacy invasion are described in the case?
- Which of these techniques is the most privacy-invading? Why?
- Is the Internet and e-commerce any different than traditional markets with respect to privacy? Don't merchants always want to know their customer?
- How do you protect your privacy on the Web?



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