CHAPTER 1 The Revolution Is Just Beginning

# KEY CONCEPTS

## Understand why it is important to study e-commerce.

• The next five years hold out exciting opportunities—as well as risks—for new and traditional businesses to exploit digital technology for market advantage. It is important to study e-commerce in order to be able to perceive and understand these opportunities and risks that lie ahead.

## Define e-commerce, understand how e-commerce differs from e-business, identify the primary technological building blocks underlying e-commerce, and recognize major current themes in e-commerce.

• E-commerce involves digitally enabled commercial transactions between and among organizations and individuals.

• E-business refers primarily to the digital enabling of transactions and processes within a firm, involving information systems under the control of the firm. For the most part, unlike e-commerce, e-business does not involve commercial transactions across organizational boundaries where value is exchanged.

• The technology juggernauts behind e-commerce are the Internet, the Web, and increasingly, the mobile platform.

• From a business perspective, one of the most important trends to note is that all forms of e-commerce continue to show very strong growth. From a technology perspective, the mobile platform has finally arrived with a bang, driving astronomical growth in mobile advertising and making true mobile e-commerce a reality. At a societal level, major issues include privacy and government surveillance, protection of intellectual property, online security, and governance of the Internet.

## Identify and describe the unique features of e-commerce technology and discuss their business significance.

There are eight features of e-commerce technology that are unique to this medium:

• Ubiquity—available just about everywhere, at all times, making it possible to shop from your desktop, at home, at work, or even from your car.

• Global reach—permits commercial transactions to cross cultural and national boundaries far more conveniently and cost-effectively than is true in traditional commerce.

• Universal standards—shared by all nations around the world, in contrast to most traditional commerce technologies, which differ from one nation to the next.

• Richness—enables an online merchant to deliver marketing messages in a way not possible with traditional commerce technologies.

• Interactivity—allows for two-way communication between merchant and consumer and enables the merchant to engage a consumer in ways similar to a face-to-face experience, but on a much more massive, global scale.

• Information density—is the total amount and quality of information available to all market participants. The Internet reduces information collection, storage, processing, and communication costs while increasing the currency, accuracy, and timeliness of information.

• Personalization and customization—the increase in information density allows merchants to target their marketing messages to specific individuals and results in a level of personalization and customization unthinkable with previously existing commerce technologies.

• Social technology—provides a many-to-many model of mass communications. Millions of users are able to generate content consumed by millions of other users. The result is the formation of social networks on a wide scale and the aggregation of large audiences on social network platforms.

## Describe the major types of e-commerce.

There are six major types of e-commerce:

• B2C e-commerce involves businesses selling to consumers and is the type of e-commerce that most consumers are likely to encounter.

• B2B e-commerce involves businesses selling to other businesses and is the largest form of e-commerce.

• C2C e-commerce is a means for consumers to sell to each other. In C2C e-commerce, the consumer prepares the product for market, places the product for auction or sale, and relies on the market maker to provide catalog, search engine, and transaction clearing capabilities so that products can be easily displayed, discovered, and paid for.

• Social e-commerce is e-commerce that is enabled by social networks and online social relationships.

• M-commerce involves the use of wireless digital devices to enable online transactions.

• Local e-commerce is a form of e-commerce that is focused on engaging the consumer based on his or her current geographic location.

## Understand the evolution of e-commerce from its early years to today.

E-commerce has gone through three stages: innovation, consolidation, and reinvention.

• The early years of e-commerce were a technological success, with the digital infrastructure created during the period solid enough to sustain significant growth in e-commerce during the next decade, and a mixed business success, with significant revenue growth and customer usage, but low profit margins.

• E-commerce entered a period of consolidation beginning in 2001 and extending into 2006.

• E-commerce entered a period of reinvention in 2007 with the emergence of the mobile digital platform, social networks, and Web 2.0 applications that attracted huge audiences in a very short time span.

## Describe the major themes underlying the study of e-commerce.

E-commerce involves three broad interrelated themes:

• Technology—To understand e-commerce, you need a basic understanding of the information technologies upon which it is built, including the Internet, the Web, and mobile platform, and a host of complementary technologies—cloud computing, desktop computers, smartphones, tablet computers, local area networks, client/server computing, packet-switched communications, protocols such as TCP/IP, web servers, HTML, and relational and non-relational databases, among others.

• Business—While technology provides the infrastructure, it is the business applications—the potential for extraordinary returns on investment—that create the interest and excitement in e-commerce. Therefore, you also need to understand some key business concepts such as electronic markets, information goods, business models, firm and industry value chains, industry structure, and consumer behavior in digital markets.

• Society—Understanding the pressures that global e-commerce places on contemporary society is critical to being successful in the e-commerce marketplace. The primary societal issues are intellectual property, individual privacy, and public policy.

## Identify the major academic disciplines contributing to e-commerce.

There are two primary approaches to e-commerce: technical and behavioral. Each of these approaches is represented by several academic disciplines.

• On the technical side, this includes computer science, operations management, and information systems.

• On the behavioral side, it includes information systems as well as sociology, economics, finance and accounting, management, and marketing.

# Q U E S T I O N S

1. What is e-commerce? How does it differ from e-business? Where does it intersect with e-business?

2. What is information asymmetry?

3. What are some of the unique features of e-commerce technology?

4. What is a marketspace?

5. What are three benefits of universal standards?

6. Compare online and traditional transactions in terms of richness.

7. Name three of the business consequences that can result from growth in information density.

8. What is Web 2.0? Give examples of Web 2.0 sites and explain why you included them in your list.

9. Give examples of B2C, B2B, C2C, and social, mobile, and local e-commerce besides those listed in the chapter materials.

10. How are e-commerce technologies similar to or different from other technologies that have changed commerce in the past?

11. Describe the three different stages in the evolution of e-commerce.

12. Define disintermediation and explain the benefits to Internet users of such a phenomenon. How does disintermediation impact friction-free commerce?

13. What are some of the major advantages and disadvantages of being a first mover?

14. What is a network effect, and why is it valuable?

15. Discuss the ways in which the early years of e-commerce can be considered both a success and a failure.

16. What are five of the major differences between the early years of e-commerce and today’s e-commerce?

17. Why is a multidisciplinary approach necessary if one hopes to understand e-commerce?

18. What are some of the privacy issues that Facebook has created?

19. What are those who take a behavioral approach to studying e-commerce interested in?