Chapter 1
Overview of Electronic Commerce

Learning Objectives

Upon completion of this chapter, you will be able to:
1. Define electronic commerce (EC) and describe its various categories.
2. Describe and discuss the content and framework of EC.
3. Describe the major types of EC transactions.
4. Discuss e-commerce 2.0.
5. Describe social commerce and social software.
6. Understand the elements of the digital world.
7. Describe the drivers of EC as they relate to business pressures and organizational responses.
8. Describe some EC business models.
9. Describe the benefits of EC to organizations, consumers, and society.
10. List and describe the major limitations of EC.

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Answers to Pause/Break Section Review Questions

Section 1.1 Review Questions

1. Define EC and e-business.

Electronic commerce is the process of buying, selling, or exchanging products, services, and information via computer networks. E-business is a broader definition of EC that includes not just the buying and selling of goods and services, but also servicing customers, collaborating with business partners and conducting electronic transactions within an organization.
2. *Distinguish between pure and partial EC.*

Companies utilizing pure EC conduct all of their business online. Businesses utilizing partial EC conduct a portion of their business online and a portion of their business offline.


Click-and-mortar organizations conduct e-commerce activities, but do their primary business in the physical world. Pure play organizations rely on the Internet and EC for all of their sales.


Electronic market – An online marketplace where buyers and sellers meet to exchange goods, services, money or information.

5. *Define intranets and extranets.*

An intranet is an internal use only Web site used by companies. An extranet is a company’s secured Web site used by select individuals and organizations.

### Section 1.2 Review Questions

1. *List the major components of the EC framework.*

The EC framework is made up of the following components: people, public policy, technical standards and protocols, business partners and support services.

2. *List the major transactional types of EC.*

The major transactional types of EC include: business-to-business, business-to-consumer, business-to-business-to-consumer, consumer-to-business, consumer-to-consumer, mobile commerce, intrabusiness EC, business-to-employee, collaborative commerce, nonbusiness EC, electronic government, and exchange-to-exchange.

3. *Describe the major landmarks in EC history.*

The major landmarks in EC history began with the use of EDI to transmit business information. This was followed by a wide public acceptance of the Internet. The next major landmark was the development of several early electronic commerce sites online and the growth of the “new economy.” Another major landmark is the winding down of many of these “new economy” businesses. Currently the growth of new Web 2.0 services and ventures defines EC.
4. List some EC successes and failures.

Student answers will vary and may include some of the examples given on page 11.

5. Summarize the future of EC.

Student perceptions will vary, but may focus on the growth and variation of EC services.

Section 1.3 Review Questions

1. Define social computing and list its characteristics.

Social computing is computing that is concerned with the intersection of social behavior and information systems. It is performed with a set of tools that includes blogs, mashups, instant messaging, social network services, wikis, social bookmarking and other social software, and marketplaces.

2. Define Web 2.0 and list its attributes.

The second-generation of Internet-based services that let people collaborate and share information online in new ways, such as social networking sites, wiki communication tools, and folksonomies. Attributes include its functionality and open access to information/data.

3. Define social networks.

A category of Internet applications that help connect friends, business partners, or individuals with specific interests by providing free services such as photo presentation, e-mail, blogging, and so on using a variety of tools.

4. Describe the capabilities of social network services (SNSs).

The following are representative capabilities and services provided by social network sites:

- Users can construct a Web page that they can use to present themselves to the larger community.
- Users can create a circle of friends who are linked together.
- The site provides discussion forums (by group, by topic).
- Photo, video, and document viewing and sharing (streaming videos, user-supplied videos) are supported.
- Wikis can be used to jointly create documents.
- Blogs can be used for discussion, dissemination of information, and much more.
5. Describe Facebook. Why is it so popular?

Facebook is a social network that provides a variety of features to members. Members use these services to share information and content with each other in a social setting. Facebook is popular due to the large number of features and other users with which to interact.

6. What is an enterprise social network?

These networks are similar in function to other social networks, but are organized to fulfill a business, as opposed to purely social, purpose.

7. Define social commerce.

The e-commerce activities conducted in social networks and/or by using social software (i.e., Web 2.0 tools).

8. Describe e-commerce activities on Facebook. Why is it referred to as f-commerce?

These activities consist of purchases with the social network, relying on its user base. Because Facebook has the largest user base, social commerce was termed “f-commerce” (“F” for Facebook).

9. Define virtual worlds and list their characteristics.

A user-defined world in which people can interact, play, and do business. The most publicized virtual world is Second Life. Virtual worlds are characterized by their immersive, interactive environments.

10. Describe some ways for students with computer skills to make money from virtual worlds.

Students could potentially create goods or services to be sold in these worlds.

**Section 1.4 Review Questions**

1. Define the digital revolution and list its components.

The digital revolution is the change in the way individuals communicate and do business based on advances in technology.

2. List the characteristics of the digital economy.

These characteristics include: a wide variety of digitized products, financial transactions being conducted digitally, and microprocessors and network capabilities embedded in physical goods.
3. Define a digital enterprise.

A new business model that uses IT in a fundamental way to accomplish one or more of three basic objectives: reach and engage customers more effectively, boost employee productivity, and improve operating efficiency. It uses converged communication and computing technology in a way that improves business processes.

4. Compare traditional and digital enterprises.

Both enterprises focus on serving the market with goods and services, but the digital enterprise capitalizes on the benefits of new technologies in all aspects of its business operations.

5. Describe the digital society.

A digital society is a societal structure built within the confines of technology.


Student experiences will vary based on the time of visit.

**Section 1.5 Review Questions**

1. List the components of the business environment impact model and explain the model.

The model describes how the business environment creates problems and opportunities that affect the company and how the company responds to those stimuli to create solutions.

2. List the major factors in today’s business environment.

The major business pressures faced by organizations can be divided into markets, societal, and technological categories.

3. List some of the major response activities taken by organizations.

Organizations respond to business pressures by using: strategic systems, continuous improvement systems, business alliances, electronic markets, increased efficiencies, employee empowerment, supply chain improvements, and mass customization.

4. List and briefly discuss five capabilities of EC (consult Exhibit 1.10).

The major capabilities are in Exhibit 1.10 and include:
- Efficient transactions
- Fast Dissemination of Information
• Price Comparison for Customers
• Personalization, Customization
• Global Reach
• Rich Media, Entertainment, Social Networking
• Anytime, Anywhere Convenience
• Easy to Find Product/Vendor Information
• Productivity Booster
• Knowledge, Advice, Collaboration

Section 1.6 Review Questions

1. What is a business model? Describe its functions and properties.

A business model is a method of doing business by which a company can generate revenue to sustain itself. A business plan is a written document that identifies the business goals and outlines the plan to achieve them. A business case is a written document that is used by managers to gather funding for specific applications for projects; its major emphasis is the justification for specific investment.

2. Describe a revenue model and a value proposition. How are they related?

Revenue model – description of how the company or an EC project will earn money
Value Proposition – the benefits a company can derive from using EC
They are related because they define the attributes of a business that will help it succeed.

3. Describe the following business models: direct marketing, tendering system, electronic exchanges, viral marketing, and social networking/commerce.

• Direct marketing – advertising to individuals in the hope that they will purchase a product or service
• Tendering system – collecting a use fee by providing the means for others to conduct transactions online
• Electronic exchanges – collecting a use fee by providing the means for others to find buyers online within a community
• Viral marketing – word of mouth marketing
• Social networking – creating a suite of services that allows individuals to communicate and interact with each other

4. Identify business models related to buying and those related to selling.

Some business models related to buying include: electronic tendering systems, find the best price, group purchasing and supply chain improvements. Some business models related to selling include: online direct marketing, name your own price, affiliate marketing, buyer marketing, online auctions, product and service customization, electronic marketplaces and exchanges and exchanges and supply chain improvements.
5. Describe how viral marketing works.

Viral marketing creates a unique advertisement or proposition that is then spread by users.

**Section 1.7 Review Questions**

1. Describe some EC benefits to organizations, individuals, and society.

EC benefits consumers by providing them convenience, speed, reduced costs, customization, personalization and communities. EC benefits organizations by expanding the marketplace, creating a cost savings, improving business processes and promoting interactivity. EC benefits society by improving the standard of living and delivery of public services.

2. List the major technological and non-technological limitations of EC.

These limitations are summarized in Exhibit 1.13.

3. Describe some of the benefits of studying EC.

EC provides both an understanding of business ideas as well as the expanding technologies that support them.

4. How can EC help entrepreneurship?

EC helps entrepreneurs by allowing for easier entry into markets.

**Answers to EC Application Case Questions**

**EC Application Case 1.1: Zappos: A Success Story of Selling Footwear Online**

Questions

1. List the major critical success factors of the company.

- Large selection
- Fast delivery
- Positive culture
- Customer service

2. Why was Amazon.com interested in the company?
It allows Amazon to leverage its supplier relationships, while maintaining a separate brand.

3. What is “WOW” about?

It relates to a customer experience defined by a huge selection and excellent service.

4. Why did the company change its business model?

After being successful with shoes, it was possible to leverage the brand into other products.

5. How is order fulfillment being done?

Fulfillment is completed through a large warehouse of products, allowing for fast delivery. This fulfillment method creates a larger overhead and its associated costs, but allows for faster service. Other retailers like Amazon use outside suppliers and drop-shipping to reduce their warehouse requirements.

6. Access wikihow.com/customize-your-shoes. Discuss how such customization may affect Zappos’s business.

This type of service may decrease the importance of Zappos selection, but would not benefit from faster fulfillment.

**EC Application Case 1.2: Groupon**

Questions

1. It is difficult to do business with Groupon. About 85% of merchants’ suggestions are dismissed by Groupon. Why do you think Groupon is so strict and how will this policy impact the competition?

Because of the limited space to market (daily), Groupon needs to be careful to select only the deals that will perform the best. This leaves space for competitors to select the discarded deals.

2. Some claim that Groupon is basically an e-mail list that charges advertisers to send out their coupons (called Groupons). Comment.

This is true to some extent, but Groupon also benefits customers by being discriminating in the deals it selects.

3. Why does Groupon use Facebook to promote its business, while Facebook is its competitor?
Groupon benefits from the massive user base of Facebook.

4. Read Carpenter (2010) and write a short essay on Groupon’s chance of survival in the intensely competitive environment. Examine its revenue model and expansion plans.

Student essays will vary.

5. Learn more about Groupon’s order fulfillment (e.g., ability to handle volume, control of deliveries, and dealing with marketing and competitors). Write a report.

Student reports will vary.


Student research will vary.

7. Groupon uses classified ads for rental apartments. How does this fit with its business model?

This potentially overlaps with its current customer base.

8. Groupon now deals in B2B. Search the Internet and find out how it is being done.

Student research will vary based on the time of research since this model appears to be changing rapidly. In late 2011, Groupon was segmenting the market and providing business-targeted services to business accounts.

EC Application Case 1.3: How College Students Become Entrepreneurs

Questions

1. Go to jetpens.com and examine the catalog. What impresses you the most?

Response will vary, but may focus on site design, costs or variety.

2. Evaluate the site’s ease of use.

Response will vary, but the site appears easy to use.

3. Do you think that a business like this can succeed as an independent online-only store? Why or why not?
Response will vary, but niche marketing online has historically succeeded in certain areas.

4. What is the purpose of the site’s JetPress RSS Feed?

This allows the company to keep users informed of new offerings and promotions.

**Answers to Discussion Questions**


Brick-and-mortar organizations only maintain a presence off-line. Click-and-mortar organizations maintain a presence both online and off-line.

2. Why is buying with a smart card from a vending machine considered EC?

EC can be defined as the application of technology toward the automation of business transactions and workflow. Because a smart card uses technology to automate a process (creating greater efficiencies and ease-of-use) it can therefore be considered EC.

3. Explain how EC can reduce cycle time, improve employees’ empowerment, and facilitate customer support.

EC can reduce cycle time by eliminating steps in business processes. The steps may be redundant or can be replaced with more efficient technology solutions. The elimination of the steps speeds the overall process and reduces cycle time. EC can provide employee empowerment by providing employees with greater and easier access to information provided by the employer. EC facilitates customer support by providing a wide range of technological solutions and communication opportunities. Additionally, EC supports self-help customer service so consumers can answer their own questions.

4. Compare and contrast viral marketing with affiliate marketing.

In both viral and affiliate marketing, a business relies on a third party to assist in its marketing effort. With affiliate marketing, individuals or firms are paid based on the amount of additional business they can send to the selling firm. With viral marketing, individuals are encouraged to market the product to others without any financial gain.

5. Identify the contribution of Web 2.0. What does it add to EC?

Web 2.0 adds a variety of tools and services that allows for larger feature-sets and customer draws in EC.
6. Discuss the reasons companies embark on social commerce.

Companies will generally use social commerce to increase their marketing by leveraging networks that contain potential customers.

7. Distinguish an enterprise social network from a public one such as Facebook.

The largest difference is the intended target, with enterprise social networks focusing on internal groups, and Facebook focusing on the mass market.

8. Carefully examine the nontechnological limitations of EC. Which are company dependent and which are generic?

All of the listed nontechnological limitations are generic concerns with the exception of “Lack of trust in EC and in unknown sellers hinders buying.” This limitation may be overcome by well-known and established merchants who will bring with them some level of customer confidence.

9. Why are virtual worlds such as Second Life related to EC?

These are related because there is a fee associated, and the platform allows for the sale of virtual goods and services.

10. Register at ibm.com/enterpriseofthefuture and download IBM’s study “The Enterprise of the Future” (IBM 2008). In one page, summarize how the enterprise of the future differs from today’s enterprise.

Student answers will vary.

Topics for Class Discussion and Debates

1. How can EC be a business pressure and an organizational response to other business pressure?

Student answers will vary. The need for EC can drive changes in an organization, and the changes needed by EC can create pressure within the organization.

2. Debate: Does digital business eliminate the “human touch” in trading? And if “yes,” is it really bad?

Student answers will vary. The use of EC can reduce the need for human interactions in commerce. This reduction can increase efficiency, but may also reduce the amount of “personal touch.”
3. Why do companies frequently change their business models? What are the advantages? The disadvantages?

Student answers will vary. Companies may change models in an attempt to increase profitability, but it may create decreases in profitability or organizational cohesion.

4. Debate: EC eliminates more jobs than it creates. Should we restrict its use and growth?

Student answers will vary. While the initial premise is correct, increased efficiencies may also allow for business expansion.

5. Debate: Will online fashion hurt fashion retailers?

Student answers will vary. Students may agree (zero sum gain) or disagree (increased overall interest).

**Internet Exercises**
(Note: URLs may change over time; please check the Internet Exercises on the Turban Web site for possible updates: www.pearsonhighered.com/turban.)

1. Visit bigboxx.com and identify the services the company provides to its customers. What type of EC is this? What business model(s) does Bigboxx use?

This company provides a large supply of office products, as well as other products and services to customers in the Hong Kong market. This company focuses primarily on B2B sales. This company makes the majority of its revenue through the direct sale of items.

2. Visit Amazon.com’s site (amazon.com) and locate recent information in the following areas:

   a. Find the five top-selling books on EC.

      Student information will vary based on when this question is completed.

   b. Find a review of one of these books.

      Student information will vary based on when this question is completed.

   c. Review the customer services you can get from Amazon and describe the benefits you receive from shopping there.

      Amazon.com provides several services for customers. These benefits include:
      - free shipping on large orders
      - the ability to track orders
      - the ability to combine orders
• the ability to send orders as guests
• additional answers will vary

d. **Review the products directory.**

Amazon.com provides a wide variety of products including books, electronics, music, travel services, and many others.

3. **Visit priceline.com and zappos.com identify the various business models used by both. Discuss their advantages.**

Priceline.com uses the “name your own price” or reverse auction business model. This model allows consumers to place bids for different services with several third-party companies through priceline.com. If the amount paid by the customer meets the third-party company’s minimum sales price, the customer purchases the product or service at that price. Zappos provides a large selection, and quick delivery. Priceline benefits by providing a service for the cost-sensitive, while Zappos caters to those who have very specific needs.

4. **Go to nike.com and design your own shoes. Next visit office.microsoft.com and create your own business card. Finally, enter jaguar.com and configure the car of your dreams. What are the advantages of each activity? The disadvantages?**

Each of these sites provides the ability of individual customization for various products. The major advantage of this system is the ability of the consumer to create and purchase a product that meets their individual specifications. The disadvantages of the systems are the limitations and possible customizations and the additional cost and fulfillment time associated with customized products.


Opinions will vary based on student preferences. Each site has a different mix of features and user experience.

6. **Enter espn.go.com, 123greetings.com, facebook.com and identify and list all the revenue sources on each of the companies’ sites.**

Because of the large range of options, and changes over time, student responses may vary. For example, ESPN currently displays:

- Advertising (pop-up)
- Advertising (co-branding MSN)
- Advertising (banners)
- Advertising (internal, for ESPN)
- E-Commerce (sales)
7. Enter lala.com and listen to some of the commercial-free digital songs offered (cost 10¢). What other digital products and services do they offer? Write a summary.

Student responses will vary. The site offers other products such as TV and movies.

8. Enter philatino.com, stampauctioncentral.com and statusint.com. Identify the business model(s) and revenue models they use.

Student responses will vary. The sites appear to be intermediaries who use the auction model.

9. Enter lowes.com. View the “design it” online feature and the animated “How Tos.” Examine the Project Calculators and Gift Advisor features. Relate these to the business models and other EC Features of this chapter.

Student responses will vary based on the wide variety of tools available. These tools are meant to allow for customization and guided commerce.

10. Go to zipcar.com. What can this site help you do?

Site allows you to rent cars.

11. Enter digitalenterprise.org. Prepare a report regarding the latest EC models and developments.

Student answers will vary. The site focus is on new and upcoming business models and comments on if they might succeed.

12. Visit some Web sites that offer employment opportunities in EC (such as execunet.com and monster.com). Compare the EC salaries to salaries offered to accountants. For other information on EC salaries, check Computerworld’s annual salary survey, unixl.com, and salary.com

Student answers will vary. There is a great deal of variation across location and company.


Student answers will vary. Each site has a different mix of features and user experience.

14. Visit ticketmaster.com, ticketonline.com, and other sites that sell event tickets online. Assess the competition in online ticket sales. What services do the different sites provide?
Student answers will vary. Competition is strong, with each site attempting to provide the best suite of services.

15. Enter The Timberland Company (timberland.com) and design a pair of boots. Compare it to building your own sneakers at Nike.

Student answers may vary. Both services provide a variety of customizations for shoes. Students will differ on the importance of the interface in each option and possible selections.

16. Examine two or three of the following sites: prosper.com, swapthing.com, swaptree.com, peerflixe.com, lala.com, swapvillage.com, bigvine.com, etc. Compare their business and revenue models.

Student answers will vary. These sites allow for the sale of goods – C2C.

Team Assignments and Role Playing

1. Assignment for the Opening Case
Read the opening case and answer the following questions.
   a. Why would you buy (or not buy) from Net-a-Porter?

Student opinions will vary. The service may have appeal to some.

   b. Watch the video “The Future of Shopping” (youtube.com/watch?v=jDi0FNcaock). How would you integrate this development with Net-a-Porter?

Student opinions will vary, but this trend may benefit the company.

   c. What are the advantages and disadvantages of the Net’s physical stores?

They allow for additional distribution opportunities, but contradict the business model.

   d. It is said that the Net is playing a significant role in transforming how designers reach customers. Explain why.

It appears that designers can now go more easily to customers, instead of through intermediaries.

   e. Read the benefits of EC to customers (Section 1.7). Which ones are most relevant here?

Possible benefits include:
   - Global reach
   - Cost reduction
   - Niche
• Time to market
• Selection

f. What EC capabilities are helping the Net and its designers?

Some capabilities include the ability to focus on a niche customer group and provide a wider selection than a local, physical location could.

g. Analyze the competition in the high-end fashion market.

Student opinions will vary. The market is fairly new, with some strong entrants, but a historical model that is very location-driven.

h. What is the importance of globalization in this case?

It allows for both a larger selection and user base.

i. Imitators are springing up on all sides. Even eBay and Amazon.com are expanding their fashion e-tailing efforts. What strategy do you suggest for the Net? (Hint: Read Brodie 2009 to get some ideas.)

Student opinions will vary. Many answers will focus on differentiation and services.

2. Create an online group for studying EC or a particular aspect of EC that interests you. You can do this via Google Groups, a social network of your choice, or Yahoo! Groups. Each member of the group must have an e-mail account. Go to Yahoo! Groups groups.yahoo.com and log in.

Responses will vary. Each site offers a different set of tools and user experience.

3. Each team will research two EC success stories. Members of the group should examine companies that operate solely online and some that extensively utilize a click-and-mortar strategy. Each team should identify the critical success factors for its companies and present a report to the other teams.

Responses will vary based on the businesses chosen by students and the source of their information.

4. Each team selects a business-oriented social network such as Linkedin, Xing, or Viadeo. Each team presents the essentials of the site, the attributes, etc. Each team will try to convince other students why their site is superior (see Online File W1.11 for some resources).

Responses will vary based on the sites chosen by students. Each site offers a different set of tools and user experience.
5. Watch the video Part 1-E-Commerce (8 minutes) at youtube.com/watch?v=OY2tcQ574Ew.
   a. Update all the data shown in the video.

   Responses will vary based on when a student looks up the data (and the data source). This video is fairly old, with data mostly from 2005.

   b. What fundamental change is introduced by EC?

   The video makes the case that EC levels the playing field and opens new markets.

   c. What is the first mover advantage discussed in the video?

   First mover advantage is the benefit of being the first in a market with a product or service and avoiding initial competition.

   d. Amazon.com and other companies that lost money during the time the video was made are making lots of money today; find out why.

   Again it will depend on when research is completed. In general, as first movers, these companies needed to invest to promote and gain acceptance.

   e. Identify all the EC business models discussed in the video.

   The video covers almost all B2C models.

   f. How can one conduct an EC business from home?

   The site focuses on affiliate marketing.

   g. EC is considered a disruptor. In what ways?

   It is, because it changes the traditional rules and balance in business.

6. All class members that are not registered in Second Life need to register and create their avatars. Let each team address one of the following areas:

   ◗ Trading virtual properties
   ◗ Creating buildings, projects, stores
   ◗ Shopping and retail outlets
   ◗ Virtual jobs
   ◗ Learning and training
   ◗ Other topics
   a. Prepare a description of what is going on in that area.
b. Have members’ avatars interact with other avatars. Write a report about your experience.
c. What can you learn from this project?

Student answers will vary. Second Life provides a huge range of experiences, but some feel it has a steep learning curve.

**Answers to End-of-Chapter Real-World Case Questions: E-Commerce at the National Football League (NFL)**

**Questions**

1. Identify all applications related to B2C in online stores.

Many items are sold including official and unofficial merchandise, as well as tickets to events.

2. Identify all B2C applications inside the stadium.

Applications include access to league information, B2C sales (inside and outside of the stadium) and stream video.

3. Identify all B2E applications inside the stadium.

Examples include information for coaches and security applications.

4. Relate online game playing to EC in NFL.

The NFL supports online game playing for economic benefit and to increase interest in its physical teams.

5. Compare the NFL information available on Facebook and Twitter.

Student perceptions will vary based on the time of visit.

6. Find additional NFL-related applications not cited in this case.

Student research will vary. Many options exist, depending on the search.

7. Enter ignify.com/Atlanta_Falcons_eCommerce_Case_Study.html. Read the case, then go to the Falcons’ online store and describe all major EC models that are used there.

Student research will vary. The site offers a number of B2C models and services.

8. Find information on ball tracking technology that can be used by NFL.
Student research will vary, based on search.

9. *Compare Madden NFL 11 with NFL fantasy games.*

Student opinions will vary, based on search.