

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. Describe some EC business models.
5. Describe the benefits of EC to organizations, consumers, and society.
6. Describe the limitations of EC.
7. Describe the role of the digital revolution in EC.
8. Describe the EC contribution to organizations responding to environmental pressures.

Content

Marks & Spencer—A New Way to Compete

- 1.1 Electronic Commerce: Definitions and Concepts
- 1.2 The EC Framework, Classification, and Content
- 1.3 E-Commerce Business Plans, Cases, and Models
- 1.4 Benefits and Limitations of EC
- 1.5 The Digital Revolution, Its Business Environment, and Organizational Responses
- 1.6 Putting It All Together
- 1.7 Text Overview

Managerial Issues

Real World Case: E-Commerce Supports Field Employees at Maybelline

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 off-line.

3. *Define click-and-mortar organizations.*

These are organizations that conduct e-commerce activities, but do their primary business in the physical world.

4. *Define electronic markets, IOSs, and intraorganizational information systems.*

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

IOSs – Communication systems that allow routine transaction processing and information flow between two or more organizations.

Intraorganizational information systems – Communication systems that enable e-commerce activities to go on within individual 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, the 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.

4. *List some EC successes and failures.*

Student answers will vary.

Section 1.3 Review Questions

1. *Define a business plan, business case, and business model.*

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. A business model is a method of doing business by which a company can generate revenue to sustain itself.

2. *Describe a revenue model and a value proposition.*

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.

3. *Describe the following business models: name your own price, affiliate marketing, viral marketing, and product customization.*

Name your own price – reverse auction where bidders submit prices they would pay, and the system attempts to match those prices with merchants

Affiliate marketing – One firm helps advertise for another and takes a commission on sales from referrals

Viral marketing – Word of mouth marketing

Product customization – creating products based on individual needs

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 supply chain improvements.

5. *Describe how a linear supply chain can be changed to a hub.*

By allowing all members and levels of the supply chain to interact directly with a central hub (private or third-party), members can more easily communicate back and forth while improving and streamlining their overall processes.

Section 1.4 Review Questions

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

EC benefits consumers by providing them convenience, speed, cost, 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 1.5.

Section 1.5 Review Questions

1. *Define the digital economy.*

A digital economy is an economy that is based on digital technologies, including digital communication networks, computers, software, and other related information technologies. It may also be called the Internet economy, the new economy, or the Web economy.

2. *List the three characteristics of the digital revolution cited by Choi and Winston.*

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

3. *List the major business pressures faced by organizations today.*

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

4. *List the major organizational responses to business pressures.*

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.

5. *Describe how EC supports organization responses to business pressures.*

EC, and technology in general, provide organizations with ways to operate their businesses more efficiently by providing services and functions that in the past have been performed by employees at less than optimum efficiencies.

Section 1.6 Review Questions

1. *Define intranets and extranets.*

An intranet is an internal corporate or government network that uses Internet tools, such as Web browsers, and Internet protocols. An extranet is a network that uses the Internet to connect multiple intranets.

2. *What is a corporate portal?*

A corporate portal is a major gateway through which employees, business partners and the public can enter a corporate Web site.

3. *Identify EC transaction models (e.g., B2B) in Exhibit 1.9 (page 27).*

These would include:

- Selling online
- Selling digital goods
- Online auctions
- Reverse Auctions
- Supply chains

Answers to EC Application Case Questions

EC Application Case 1.1: Voice-Based 511 Traveler Information Line

Questions

1. *Enter **tellme.com** and find more information about this case. Summarize the benefits to the users.*

Student answers will vary. Users obtain a number of benefits, but the largest is the ability to quickly and easily access travel information from a single number.

2. *What is the role of Tellme? What Internet technology is used?*

Tellme is the technology provider that uses a voice portal to access a number of Web sites and databases.

3. *Can this application be classified as m-commerce? As l-commerce? Why or why not?*

This application is m-commerce since it is accessed with a mobile device. It is not l-commerce, since no location sensors (GPS) are used.

EC Application Case 1.2: The Success Story of Campusfood.com

Questions

1. *Classify this application by EC transaction type.*

This is a hybrid business model combining B2B and B2C elements. The business acts as an intermediary to other businesses (restaurants) and then resells these products to students (food). This business could be described as B2B2C.

2. *Explain the benefits of **Campusfood.com** for its students and for the restaurants it represents.*

Both parties received benefits from this relationship. Campusfood.com is able to create a market and revenue by reselling restaurants' food to students. The greater variety of restaurants that they represent, the better possible market for students (and thus higher revenues). Restaurants benefit from the additional marketing and sales volume generated by Campusfood.com

3. *Trace the flow of digitized information in this venture.*

Campusfood.com receives restaurant menus and enters them into their EC site. Consumers view this information on the Internet and place electronic orders to Campusfood.com. The orders are then forwarded digitally to the restaurant.

4. *How does the outsourcing of marketing activities contribute to the business?*

By outsourcing marketing activities, the business is able to benefit from the firm's expertise in this area. Additionally, the business is able to concentrate on its core abilities.

EC Application Case 1.3: Orbis Group Changes a Linear Physical Supply Chain to an Electronic Hub

Questions

1. *Identify the benefits of the ProductBank system to the supply-chain participants.*

The hub model is beneficial to the participants in the supply chain because it eliminates unnecessary steps in the process, and by doing so lowers overall cost and increases the speed of the process.

2. *Where does the cost reduction in the ProductBank process come from?*

The cost reduction comes from several locations. The first area of reduction is the ability for the retailer or their advertising agency to immediately view and select an appropriate image without the use of a courier. When an image is selected it can be immediately pulled from the database instead of being sent out for scanning.

3. *Where does the cycle time reduction come from?*

The cycle time reduction comes from two locations. The first area of reduction is the ability for the retailer or their advertising agency to immediately view and select an appropriate image without the use of a courier. When an image is selected it can be immediately pulled from the database instead of being sent out for scanning.

4. *Explain the benefits of electronic collaboration between the catalog owner and the ad agency.*

Electronic collaboration between the two parties allows them to communicate more quickly and efficiently than traditional methods. The retailer is able to participate more fully in the process of the selection of photos, while the ad agency is able to more quickly process their customers' requests.

EC Application Case 1.4: The Internet and the Intranet Shorten Time to Market for New Drugs

Questions

1. *How does the computerized drug application system facilitate collaboration?*

This application system facilitates collaboration because it provides full and easy access to the information needed. In addition, the information can also be easily searched and specific facts retrieved quickly.

2. *How is cycle time reduced?*

Cycle time is reduced because pharmaceutical and FDA employees are able to concentrate more fully on the review of the drug in question. This is accomplished by the ease of searching online databases for facts and information as opposed to wading through hundreds of thousands of pages of paper documents.

Answers to Discussion Questions

1. *Compare and contrast viral marketing with affiliate marketing.*

In both viral and affiliate marketing of business, relying on a third party to assist in its marketing effort is necessary. 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.

2. 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 EC with the exception of "Lack of trust in EC and in unknown sellers hinder buying." This limitation may be overcome by well-known and established merchants who will bring with them some level of customer confidence.

3. Compare brick-and-mortar and click-and-mortar organizations.

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

4. Why is it said the EC is a catalyst of fundamental changes in organizations?

EC causes fundamental changes in organizations because it requires business models and processes to be redesigned and streamlined. This is required for firms to have successful EC.

5. Explain how EC facilitates supply chain management.

EC facilitates supply chain management by exposing the inner workings of the supply chain and indicating which areas contribute the greatest value. These indications, coupled with a firm understanding of the chain's workings, provide the necessary information for supply-chain optimization.

6. Which of the EC limitations do you think will be more easily overcome—the technological or the nontechnological limitations, and why?

Student answers will vary. In most cases technical limitations are easier to overcome, with customer preferences taking more time to adapt.

7. 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.

8. *How does EC facilitate customization of products and services?*

EC facilitates customization by allowing customers to see the full range of options available for a given product. Customers are then able to select the options that they desire and these options may be sent directly to the manufacturer or service provider. This provides a more direct link between the customer and the firm that will eventually fill their custom order.

9. *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.

10. *Why is distance learning considered EC?*

EC can be defined as the application of technology toward the automation of business transactions and workflow, as well as a gathering place for community members to learn, transact and collaborate. Distance learning fits both of these definitions because it provides the technology solution for workflows (education) while also creating a learning community.

cuu duong than cong. com

Internet Exercises

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

1. Enter ***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. Enter Amazon.com's site (***amazon.com***) and locate recent information in the following areas:

cuu duong than cong. com

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

- a. Find the five top-selling books on EC.
- b. Find a review of one of these books.
- 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 gifts
- 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. *Enter **priceline.com** and identify the various business models it uses.*

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.

4. *Go to **ups.com** and find information about recent EC projects that are related to logistics and supply chain management.*

UPS provides a variety of EC business products and solutions. Many of the solutions allow companies to easily ship, track and receive packages through UPS. In many of these cases, UPS provides software and services that allows customers to link UPS information to their existing information or e-commerce systems. The systems then allow greater visibility of the supply chain creating easier understanding of problems and opportunities in logistics.

5. *Go to **mixonix.com** and create a CD. Then go to **nike.com** and design your own shoes. Next visit **iprint.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.

6. *Enter **chemconnect.com**. What kind of EC does this site represent? What benefits can it provide to buyers? To sellers?*

This company provides an Internet-based exchange for the buying and selling of chemicals and plastics. This site provides benefits to both buyers and sellers. Buyers

are able to evaluate pricing, availability and other information from a variety of sellers. Sellers are able to present their products for sale to a wide variety of buyers.

7. *It is time you try to sell or buy on an online auction. You can try **eBay.com**, **auction.yahoo.com**, or an auction site of your choice. You can participate in an auction of almost any country. Prepare a short report describing your experiences.*

Reports will vary based on the auction site used by the student. In many cases students will comment on the overall experience of listing and purchasing products. Points of reference would include the ease-of-use of the site, the ease in searching and gathering information, the ability to compare products and the ease in completing transactions.

8. *Try to save on your next purchase by using group purchasing. Visit **letsbuyit.com**, **shop2gether.com**, and **buyerzone.com**. Which site do you prefer? Why?*

Opinions will vary based on student preferences.

9. *Enter **espn.com** and identify all sources of revenue there.*

I was able to identify:

Advertising (pop-up)

Advertising (co-branding MSN)

Advertising (banners)

Advertising (internal, for ESPN)

E-Commerce (sales)

Team Assignments and Role Playing

1. *Assign each team two failed or failing Internet companies (e.g., **musicmaker.com**, **comdex.com**). Use **startupfailures.com** to identify companies that are in distress. **Fortune.com** is a good source of details for particular business failures. Have each team prepare a report on why the companies failed or are failing.*

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

2. *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.

Answers to End-of-Chapter Real-World Case Questions: E-Commerce Supports Field Employees at Maybelline

Questions

1. *IVR systems are still popular. What advantages do they have over a system in which the reps mail or fax reports?*

Information comes in faster, and in a machine understandable format.

2. *Explain why the MSP application is an e-commerce application. Compare it to the definitions and classifications in the chapter.*

The MSP application is an e-commerce application because it uses IT to directly enable communications and sales of products.

3. *The existing technology enables transmission of data any time an employee can access the Internet with a PC. Technically, the system can be enhanced so that the data can be sent wirelessly from any location as soon as they are entered. Would you recommend such a wireless system to Maybelline? Why or why not?*

Student answers will vary. Students will weigh the benefits of real-time information against the costs and access issues of a new system.

4. *Summarize the advantages of the new MSP system over the IVR one.*

Some of the advantages include:

- Easier to use
- More accurate information
- More detailed information
- More timely information
- Two-way communication
- Fulfills more roles