ELECTRONIC COMMERCE

10th Edition

Gary P. Schneider

COURSE TECHNOLOGY
CENGAGE Learning

Electronic Commerce, Tenth Edition
Gary P. Schneider, Ph.D., CPA

Editor-in-Chief: Joe Sabatino

Senior Acquisitions Editor:
Charles McCormick, Jr.

Senior Product Manager: Kate Mason

Development Editor: Amanda Brodkin

Marketing Director: Keri Witman

Marketing Manager: Adam Marsh

Senior Marketing Communications Manager:
Libby Shipp

Marketing Coordinator: Eileen Corcoran

Content Project Management:
PreMediaGlobal

Media Editor: Chris Valentine

Art Direction and Cover Design:
PreMediaGlobal

Cover Credit: ©Baris Simsek, iStock;
©VectorForever, Shutterstock

Manufacturing Planner: Julio Esperas

Compositor: PreMediaGlobal

Cengage Learning is a leading provider of customized learning solutions with office locations around the globe, including Singapore, the United Kingdom, Australia, Mexico, Brazil, and Japan. Locate your local office at: **www.cengage.com/global**

Library of Congress Control Number: 2012934926

Student Edition
ISBN-13: 978-1-133-52682-7
ISBN-10: 1-133-52682-9

Instructor Edition
ISBN-13: 978-1-133-59615-8
ISBN-10: 1-133-59615-0

Course Technology
20 Channel Center Street
Boston, MA 02210
USA

Printed in the United States of America
1 2 3 4 5 6 7 16 15 14 13 12

CHAPTER 1

INTRODUCTION TO ELECTRONIC COMMERCE

LEARNING OBJECTIVES

In this chapter, you will learn about:

- What electronic commerce is and how it has evolved into a second wave of growth
- Why companies concentrate on revenue models and the analysis of business processes instead of business models when they undertake electronic commerce initiatives
- How economic forces have created a business environment that is fostering the continued growth of electronic commerce
- How businesses use value chains and SWOT analysis to identify electronic commerce opportunities
- The international nature of electronic commerce and the challenges that arise in engaging in electronic commerce on a global scale

INTRODUCTION

In the late 1990s, electronic commerce was still emerging as a new way to do business; at that time, most companies were doing very little buying or selling online. They still were selling products in physical stores or taking orders over the telephone and by mail. However, a few companies had established solid footholds online. Amazon.com was a rapidly growing bookseller and eBay had taken the lead as a profitable auction site. The business of providing search tools for finding information online was dominated by a few well-established sites, including AltaVista, HotBot, Lycos, and

Yahoo!. Most industry observers at that time believed that any new search engine Web site would find it very difficult to compete against these established operations.

Search engines of the late 1990s provided results based on the number of times a search term appeared on Web pages. Pages that included the greatest number of occurrences of a user's search term would be more highly ranked and would thus appear near the top of the search results list. By 1998, two Stanford University students, Lawrence Page and Sergey Brin, had been working on a search engine research project for two years. Page and Brin believed that a search ranking based on the relationships between Web sites would give users better and more useful results. They developed search algorithms based on the number of links a particular Web page had to and from other highly relevant pages. In 1998, they started **Google** (*Note*: This typeface indicates a corresponding link to a related Web page in the book's Web Links Google's URL is http://www.google.com) in a friend's garage with about $1.1 million of seed money invested by a group of Stanford graduates and local businesspersons.

Most industry observers agree that Google's page ranking system, which has been continually improved since its introduction, consistently provides users with more relevant results than other search engines. Internet users flocked to Google, which became one of the most popular sites on the Internet. The site's popularity allowed Google to charge increasingly higher rates for advertising space on its Web pages. Marketing staff at Google noticed that another search engine, Goto.com (now owned by Yahoo! and operated as Yahoo! Search Marketing), was selling ad space on Web sites by allowing advertisers to bid on the price of keywords and then charging based on the number of users who clicked the ads. For example, a car dealer could bid on the price of the keyword "car." If the car dealer were the high bidder at 12 cents, then the car dealer would pay for the ad at a rate of 12 cents times the number of site visitors who clicked the ad. Google adopted this keyword bidding model in 2000 and has used it since then to sell small text ads that appear on search results pages.

This approach to selling advertising was extremely successful. Combined with the highly relevant search results provided by the page ranking system, it led to Google's continued growth. When the

company went public in 2004 (raising $1.67 billion), its market valuation was nearly $23 billion. Today, Google is one of the most successful online companies in the world. The Web provides a quick path to potential customers for any businessperson with a unique product or service. Google's improved page ranking system was available to anyone in the world the day it was introduced online.

ELECTRONIC COMMERCE: INTO THE THIRD WAVE

The business phenomenon that we now call electronic commerce has had an interesting history. From humble beginnings in the mid-1990s, electronic commerce grew rapidly until 2000, when a major downturn occurred. The popular media published endless news stories describing how the "dot-com boom" had turned into the "dot-com bust." Between 2000 and 2003, many industry observers were writing obituaries for electronic commerce. Just as the unreasonable expectations for immediate success had fueled unwarranted high expectations during the boom years, overly gloomy news reports colored perceptions during this time.

Beginning in 2003, electronic commerce began to show signs of new life. Companies that had survived the downturn were not only seeing growth in sales again, but many of them were showing profits. As the economy grew, electronic commerce grew also, but at a more rapid pace. Thus, electronic commerce gradually became a larger part of the total economy. In the general economic recession that started in 2008, electronic commerce was hurt less than most of the economy. Even in the face of recession, the second wave of electronic commerce continued forward. The technologies that underlie the future expansion of electronic commerce continue to be developed. Today's handheld devices, including mobile telephones and tablet computers, offer the potential for a third wave in the evolution of online business. This section defines electronic commerce and describes its evolution from first wave into the second wave and outlines prospects for movement into a third wave of development.

Electronic Commerce and Electronic Business

To many people, the term "electronic commerce" means shopping on the part of the Internet called the World Wide Web (the Web). However, **electronic commerce (or e-commerce)** also includes many other activities, such as businesses trading with other businesses and internal processes that companies use to support their buying, selling, hiring, planning, and other activities. Some people use the term **electronic business (or e-business)** when they are talking about electronic commerce in this broader sense. For example, IBM defines electronic business as "the transformation of key business processes through the use of Internet technologies." Most people use the terms "electronic commerce" and "electronic business" interchangeably. In this book, the term electronic commerce (or e-commerce) is used in its broadest sense and includes all business activities that use Internet technologies. Internet technologies include the Internet, the World Wide Web, and other technologies such as wireless transmissions on mobile telephone networks. Companies that operate only online are often called **dot-com** or **pure dot-com** businesses to distinguish them from companies that operate in physical locations (solely or together with online operations).

Categories of Electronic Commerce

Categorizing electronic commerce by the types of entities participating in the transactions or business processes is a useful and commonly accepted way to define online business. The five general electronic commerce categories are business-to-consumer, business-to-business, transactions and business processes, consumer-to-consumer, and business-to-government. The three categories that are most commonly used are:

- Consumer shopping on the Web, often called **business-to-consumer** (or **B2C**)
- Transactions conducted between businesses on the Web, often called **business-to-business** (or **B2B**)
- Transactions and business processes in which companies, governments, and other organizations use Internet technologies to support selling and purchasing activities

A single company might participate in activities that fall under multiple e-commerce categories. Consider a company that manufactures stereo speakers. The company might sell its finished product to consumers on the Web, which would be B2C electronic commerce. It might also purchase the materials it uses to make the speakers from other companies on the Web, which would be B2B electronic commerce. Businesses often have entire departments devoted to negotiating purchase transactions with their suppliers. These departments are usually named **supply management** or **procurement**. Thus, B2B electronic commerce is sometimes called **e-procurement**.

In addition to buying materials and selling speakers, the company must also undertake many other activities to convert the purchased materials into speakers. These activities might include hiring and managing the people who make the speakers, renting or buying the facilities in which the speakers are made and stored, shipping the speakers, maintaining accounting records, obtaining customer feedback, purchasing insurance, developing advertising campaigns, and designing new versions of the speakers. An increasing number of these transactions and business processes can be done on the Web. Manufacturing processes (such as the fabrication of the speakers) can be controlled using Internet technologies within the business. All of these communication, control, and transaction-related activities have become an important part of electronic commerce. Some people include these activities in the B2B category; others refer to them as underlying or supporting business processes.

For more than 80 years, business researchers have been studying the ways people behave in businesses. This research has helped managers better understand how workers do their jobs and what motivates them to work more effectively. The research results have helped managers, and more recently, the workers themselves, improve job performance. By changing the nature of jobs, managers and workers can, as the saying goes, "work smarter, not harder." An important part of doing these job studies is to learn what activities each worker performs. In this setting, an **activity** is a task performed by a worker in the course of doing his or her job.

For a much longer time—centuries, in fact—business owners have kept records of how well their businesses are performing. The formal practice of accounting, or recording transactions, dates back to the Middle Ages. A **transaction** is an exchange of value, such as a purchase, a sale, or the conversion of raw materials into a finished product. By recording transactions, accountants help business owners keep score and measure how well they are doing. All transactions involve at least one activity, and some transactions involve many activities. Not all activities result in measurable (and therefore recordable) transactions. Thus, a transaction always has one or more activities associated with it, but an activity might not be related to a transaction.

The group of logical, related, and sequential activities and transactions in which businesses engage are often collectively referred to as **business processes**. Transferring funds, placing orders, sending invoices, and shipping goods to customers are all types of activities or transactions. For example, the business process of shipping goods to customers might include a number of activities (or tasks, or transactions), such as inspecting the goods, packing the goods, negotiating with a freight company to deliver the goods, creating and printing the shipping documents, loading the goods onto the truck, and sending payment to the freight company. One important way that the Web is helping people work more effectively is by enabling employees of many different kinds of companies to work at home or from other locations (such as while traveling). In this arrangement, called **telecommuting** or **telework**, the employee logs in to the company network through the Internet instead of traveling to an office.

Figure 1-1 shows the three main categories of electronic commerce. The figure presents a rough approximation of the relative sizes of these elements. In terms of dollar volume and number of transactions, B2B electronic commerce is much greater than B2C electronic commerce. However, the number of supporting business processes is greater than the number of all B2C and B2B transactions combined.

The large oval in Figure 1-1 that represents the business processes that support selling and purchasing activities is the largest element of electronic commerce.

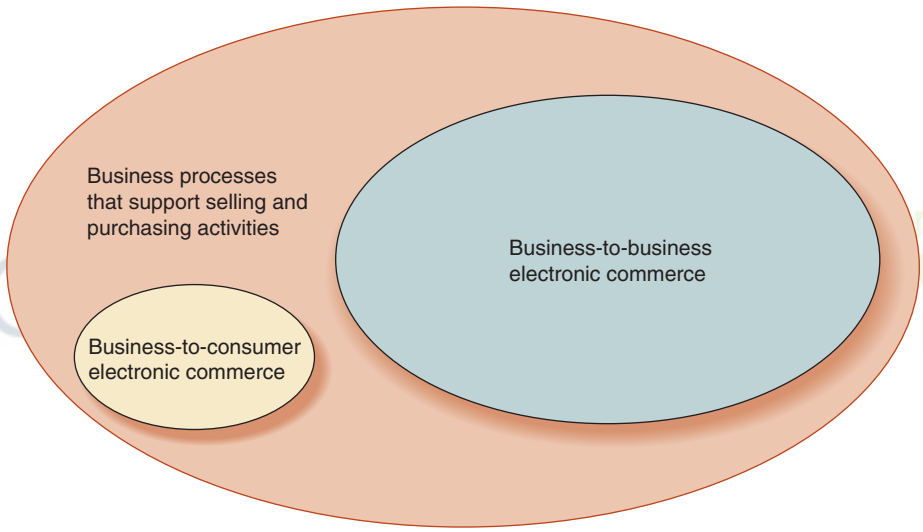


FIGURE 1-1 Elements of electronic commerce

Some researchers define a fourth category of electronic commerce, called **consumer-to-consumer** (or **C2C**), which includes individuals who buy and sell items among themselves. For example, C2C electronic commerce occurs when a person sells an item through a Web auction site to another person. In this book, C2C sales are included in the B2C category because the person selling the item acts much as a business would for purposes of the transaction.

Finally, some researchers also define a category of electronic commerce called **business-to-government** (or **B2G**); this category includes business transactions with government agencies, such as paying taxes and filing required reports. An increasing number of states have Web sites that help companies do business with state government

agencies. In this book, B2G transactions are included in the discussions of B2B electronic commerce. Figure 1-2 summarizes these five categories of electronic commerce.

Category	Description	Example
Business-to-consumer (B2C)	Businesses sell products or services to individual consumers.	Walmart.com sells merchandise to consumers through its Web site.
Business-to-business (B2B)	Businesses sell products or services to other businesses.	Grainger.com sells industrial supplies to large and small businesses through its Web site.
Business processes that support buying and selling activities	Businesses and other organizations maintain and use information to identify and evaluate customers, suppliers, and employees. Increasingly, businesses share this information in carefully managed ways with their customers, suppliers, employees, and business partners.	Dell Computer uses secure Internet connections to share current sales and sales forecast information with suppliers. The suppliers can use this information to plan their own production and deliver component parts to Dell in the right quantities at the right time.
Consumer-to-consumer (C2C)	Participants in an online marketplace can buy and sell goods to each other. Because one party is selling, and thus acting as a business, this book treats C2C transactions as part of B2C electronic commerce.	Consumers and businesses trade with each other in the eBay.com online marketplace.
Business-to-government (B2G)	Businesses sell goods or services to governments and government agencies. This book treats B2G transactions as part of B2C electronic commerce.	CA.gov procurement site allows businesses to sell online to the state of California.

FIGURE 1-2 Electronic commerce categories

The Development and Growth of Electronic Commerce

Over the thousands of years that people have engaged in commerce with one another, they have adopted the tools and technologies that became available. For example, the advent of sailing ships in ancient times opened new avenues of trade to buyers and sellers. Later innovations, such as the printing press, steam engine, and telephone, have changed the way people conduct commerce activities. The Internet has changed the way people buy, sell, hire, and organize business activities in more ways and more rapidly than any other technology in the history of business.

Electronic Funds Transfers (EFTs)

Although the Web has made online shopping possible for many businesses and individuals, in a broader sense, electronic commerce has existed for many years. For more than 40 years, banks have been using **electronic funds transfers** (**EFTs**, also called **wire transfers**), which are electronic transmissions of account exchange information over private communications' networks.

Electronic Data Interchange (EDI)

Businesses have also been engaging in a type of electronic commerce, known as electronic data interchange, for many years. **Electronic data interchange (EDI)** occurs when one business transmits computer-readable data in a standard format to another business. In the 1960s, businesses realized that many of the documents they exchanged were related to the shipping of goods; for example, invoices, purchase orders, and bills of lading. These documents included the same set of information for almost every transaction. Businesses also realized that they were spending a good deal of time and money entering this data into their computers, printing paper forms, and then reentering the data on the other side of the transaction. Although the purchase order, invoice, and bill of lading for each transaction contained much of the same information—such as item numbers, descriptions, prices, and quantities—each paper form usually had its own unique format for presenting the information. By creating a set of standard formats for transmitting the information electronically, businesses were able to reduce errors, avoid printing and mailing costs, and eliminate the need to reenter the data.

Businesses that engage in EDI with each other are called **trading partners**. The standard formats used in EDI contain the same information that businesses have always included in their standard paper invoices, purchase orders, and shipping documents. Firms such as General Electric, Sears, and Wal-Mart have been pioneers in using EDI to improve their purchasing processes and their relationships with suppliers. The U.S. government, which is one of the largest EDI trading partners in the world, was also instrumental in bringing businesses into EDI.

One problem that EDI pioneers faced was the high cost of implementation. Until the late 1990s, doing EDI meant buying expensive computer hardware and software and then either establishing direct network connections (using leased telephone lines) to all trading partners or subscribing to a value-added network. A **value-added network (VAN)** is an independent firm that offers connection and transaction-forwarding services to buyers and sellers engaged in EDI. Before the Internet came into existence as we know it today, VANs provided the connections between most trading partners and were responsible for ensuring the security of the data transmitted. VANs usually charged a fixed monthly fee plus a per-transaction charge, adding to the already significant expense of implementing EDI. Many smaller firms could not afford to participate in EDI and lost business to their larger competitors who could afford EDI.

In the late 1990s, many industry observers believed that the Internet would provide smaller companies with an alternative to EDI. Many articles in the trade press announced that the death of EDI was imminent. However, EDI continued to thrive because it was well entrenched in large companies. They had invested large amounts of money in their EDI systems and had built many of their sales, purchasing, and accounting systems around EDI. And the Internet, as an inexpensive communications medium, gave smaller companies a way to participate in EDI. The companies that operated VANs gradually moved EDI traffic to the Internet, and new companies developed other ways to help smaller businesses conduct EDI transactions on the Internet. These movements of EDI traffic to the Internet have dramatically reduced the cost of participating in EDI and have made it possible for even the smallest suppliers to do business with large customers who require its use. As a result, EDI continues to be a large portion of B2B electronic commerce and is growing steadily every year in number of transactions and dollar volume. You will learn more about EDI, VANs, and new B2B transaction technologies in Chapter 5.

The Dot-Com Boom, Bust, and Rebirth

Between 1997 and 2000, more than 12,000 Internet-related businesses were started with more than $100 billion of investors' money. In an extended burst of optimism, and what many later described as irrational exuberance, investors feared that they might miss the money-making opportunity of a lifetime. As more investors competed for a fixed number of good ideas, the price of those ideas increased. Many good ideas suffered from poor implementation. Worse, a number of bad ideas were proposed and funded. More than 5,000 of these Internet start-up firms went out of business or were acquired in the downturn that began in 2000. The media coverage of the "dot-com bust" was extensive. However, between 2000 and 2003, more than $200 billion was invested in purchasing electronic commerce businesses that were in trouble and starting new online ventures, according to the industry research firm WebMergers. This second wave of financial investment was not reported extensively in either the general or business media, but these investments quietly fueled a rebirth of growth in online business activity. This second wave provided another chance at success for many online business ideas that were poorly implemented in the early days of the Internet.

Despite the many news stories that appeared between 2000 and 2002 proclaiming the death of electronic commerce, the growth in online B2C sales actually had continued through that period, although at a slower pace than during the boom years of the late 1990s. Thus, the "bust" that was so widely reported in the media was really more of a slowdown than a collapse. After four years of doubling or tripling every year, growth in online sales slowed to an annual rate of 20 to 30 percent starting in 2001. This growth rate continued through the recession of 2008–2009.

The 2008–2009 global recession devastated many traditional retailers, particularly in the United States and Europe. Large Asian economies, such as those in China and India, were affected less and continued to expand. Around the globe, online sales overall continued to grow during that period, although at a lower rate than the 20 to 30 percent annual rates achieved earlier in the decade. As many traditional businesses remain mired in the aftereffects of that recession, online business activity has picked up and appears to be at the leading edge of economic growth. Online business growth in Asia continued at relatively high rates throughout the recessionary period, which boosted global online sales totals. In fact, online retail sales in China exceeded those in the United States for the first time in 2010. Most experts expect to see global online business grow at a sustained rate of 15 to 25 percent through 2015.

One force driving the growth in global online sales to consumers is the ever-increasing number of people who have access to the Internet. Today, billions of people around the world still do not have computers and, therefore, do not have computer access to the Internet. The predictions for continued global online business are based in part on the growing numbers of people using inexpensive devices such as mobile phones and tablet computers to access the Internet.

In addition to the growth in the B2C sector, B2B sales online have been increasing steadily for almost two decades. The dollar total of B2B online sales has been greater than B2C sales because B2B incorporates EDI, a technology that accounted for more than $400 billion per year in transactions in 1995, when Internet-based electronic commerce was just beginning. This book defines B2B sales as including companies' transactions with other businesses, with their employees, and with governmental agencies (for example, when they pay their taxes) because these business processes are all candidates for the application of Internet technologies.

The dollar amount of these B2B transactions is substantial. Intel is one example of a company that sells its products to other businesses rather than to consumers. Intel accepts more than 98 percent of its orders (more than $38 billion per year) through the Internet. Intel also purchases billions of dollars' worth of supplies and raw materials on the Web each year. The total volume of all worldwide business activities on the Web is expected to exceed $11.9 trillion by 2013. Figure 1-3 summarizes the growth of actual and estimated global online sales for the B2C and B2B categories.

Year	B2C Sales: Actual and Estimated $ Billions	B2B Sales (including EDI): Actual and Estimated $ Billions
2013	963	11,900
2012	821	10,600
2011	681	9,500
2010	573	8,600
2009	487	7,500
2008	453	6,500
2007	426	5,600
2006	361	4,800
2005	255	4,100
2004	179	2,800
2003	103	1,600
2002	91	900
2001	73	730
2000	52	600
1999	26	550
1998	11	520
1997	5	490
1996	Less than 1	460

Adapted from reports by ClickZ Network (http://www.clickz.com/stats/stats_toolbox/); eMarketer (http://www.emarketer.com/); Forrester Research (http://www.forrester.com); Internet Retailer (http://www.internetretailer.com), the Statistical Abstract of the United States, 2008, Washington: U.S. Census Bureau, and the Statistical Abstract of the United States, 2011, Washington: U.S. Census Bureau.

FIGURE 1-3 Actual and estimated online sales in B2C and B2B categories

The Second Wave of Electronic Commerce

Many researchers have noted that electronic commerce is a major change in the way business is conducted and compare it to other historic changes in economic organization such as the Industrial Revolution. However, the Industrial Revolution was not a single event, but a series of developments that took place over a 50- to 100-year period. Economists Chris Freeman and Francisco Louçã describe four distinct waves (or phases) that occurred in the Industrial Revolution in their book *As Time Goes By* (see the For Further Study and Research section at the end of this chapter). In each wave, different business strategies were successful. Electronic commerce and the information revolution brought about by the Internet will likely go through a series of waves, too. Researchers agree that the second wave of electronic commerce is well under way. This section outlines the defining characteristics of the first wave of electronic commerce and describes how the second wave is different. Later, you will learn about the third wave that is taking shape.

The first wave of electronic commerce was predominantly a U.S. phenomenon. Web pages were primarily in English, particularly on commerce sites. The second wave is characterized by its international scope, with sellers doing business in many countries and in many languages. Language translation and currency conversion have been two impediments to the efficient conduct of global business in the second wave. You will learn more about the issues that arise in global electronic commerce later in this chapter, in Chapter 7, which concerns legal issues, and in Chapter 11, which concerns online payment systems.

In the first wave, easy access to start-up capital led to an overemphasis on creating new large enterprises to exploit electronic commerce opportunities. Investors were excited about electronic commerce and wanted to participate, no matter how much it cost or how weak the underlying ideas were. In the second wave, established companies are using their own internal funds to finance gradual expansion of electronic commerce opportunities. These measured and carefully considered investments are helping electronic commerce grow more steadily, though more slowly.

The Internet technologies used in the first wave, especially in B2C commerce, were slow and inexpensive. Most consumers connected to the Internet using dial-up modems. The increase in broadband connections in homes is a key element in the B2C component of the second wave. In 2004, the number of U.S. homes with broadband connections began to increase rapidly. Most industry estimates showed that about 12 percent of U.S. homes had broadband connections in early 2004. By late 2011, those estimates were ranging between 80 and 85 percent. Other countries, such as South Korea, subsidize their citizens' Internet access and have an even higher rate of broadband usage. The increased use of home Internet connections to transfer large audio and video files is generally seen as the reason large numbers of people spent the extra money required to obtain a broadband connection. The increased speed of broadband not only makes Internet use more efficient, but it also can alter the way people use the Web. For example, a broadband connection allows a user to watch movies and television programs online—something that is impossible to do with a dial-up connection. This opens up more opportunities for businesses to make online sales. It also changes the way that online retailers can present their products to Web site visitors. Although business customers, unlike retail customers, have had fast connections to the Internet for many years, the increasing availability of wireless Internet connections has increased the volume and nature of B2B electronic commerce. Salespeople using laptop computers can stay in touch with customers, prepare quotes, and check on orders being fulfilled from virtually anywhere they happen to be. You will learn more about different types of connections in Chapter 2 and how connection speed can affect consumers' online shopping experiences in Chapters 3 and 4. You will learn how the pervasiveness of computers (laptops and tablets) and mobile phones that can access the Internet is changing B2B electronic commerce in Chapter 5.

Electronic mail (or e-mail) was used in the first wave as a tool for relatively unstructured communication. In the second wave, both B2C and B2B sellers began using e-mail as an integral part of their marketing and customer contact strategies. You will learn about e-mail technologies in Chapter 2 and e-mail marketing in Chapter 4.

Online advertising was the main intended revenue source of many failed dot-com businesses in the first wave. After a two-year dip in online advertising activity and revenues, companies began the second wave with a renewed interest in making the Internet work as an effective advertising medium. Some categories of online advertising, such as employment services (job wanted ads) are growing rapidly and are replacing traditional advertising outlets. Companies such as Google have devised ways of delivering specific ads to Internet users who are most likely to be interested in the products or services offered by those ads. You will learn about second-wave advertising strategies in Chapter 4.

The sale of digital products was fraught with difficulties during the first wave of electronic commerce. The music recording industry was unable (or, some would say, unwilling) to devise a way to distribute digital music on the Web. This created an environment in which digital piracy—the theft of musical artists' intellectual property—became rampant. The promise of electronic books was also unfulfilled. The second wave is fulfilling the promise of available technology by supporting the legal distribution of music, video, and other digital products on the Web. Apple Computer's **iTunes** Web site is an example of a second-wave digital product distribution business that is meeting the needs of consumers and its industry. You will learn more about digital product distribution strategies in Chapter 3 and about the related legal issues in Chapter 7.

Another group of technologies have emerged that have combined to make new businesses possible on the Web. The general term for these technologies is **Web 2.0**, and they include software that allows users of Web sites to participate in the creation, editing, and distribution of content on a Web site owned and operated by a third party. Sites such as Wikipedia, YouTube, and Facebook use Web 2.0 technologies. Customer relationships management software that runs from the Web, such as Salesforce.com, also uses Web 2.0 technologies. You will learn about Web 2.0 business opportunities throughout this book and you will learn about the technologies used to implement them in Chapter 9.

In the first wave of electronic commerce, many companies and investors believed that being the first Web site to offer a particular type of product or service would give them an opportunity to be successful. This strategy is called the **first-mover advantage**. As business researchers studied companies who had tried to gain a first-mover advantage, they learned that being first did not always lead to success (see the Suarez and Lanzolla article reference in the For Further Study and Research section at the end of this chapter). First movers must invest large amounts of money in new technologies and make guesses about what customers will want when those technologies are functioning. The combination of high uncertainty and the need for large investments makes being a first mover very risky. As many business strategists have noted, "It is the second mouse that gets the cheese."

First movers that were successful tended to be large companies that had an established reputation (or brand) and that also had marketing, distribution, and production expertise. First movers that were smaller or that lacked the expertise in these areas tended to be unsuccessful. Also, first movers that entered highly volatile markets or in those industries with high rates of technological change often did not do well. In the second wave, fewer businesses rely on a first-mover advantage when they take their businesses online. A good example of a company that was successful in the second wave by not being a first mover is illustrated in the opening case for this chapter about Google.

Figure 1-4 shows a summary of some key characteristics of the first and second wave of electronic commerce. This list can never be complete because every day brings new technologies and combinations of existing technologies that make additional second-wave opportunities possible.

Electronic Commerce Characteristic	First Wave	Second Wave
International character of electronic commerce	Dominated by U.S. companies	Global enterprises in many countries participating in electronic commerce
Languages	Most electronic commerce Web sites in English	Many electronic commerce Web sites available in multiple languages
Funding	Many new companies started with outside investor money	Established companies funding electronic commerce initiatives with their own capital
Connection technologies	Many electronic commerce participants used slow Internet connections	Rapidly increasing use of broadband technologies for Internet connections
E-mail contact with customers	Unstructured e-mail communication with customers	Customized e-mail strategies now integral to customer contact
Advertising and electronic commerce integration	Reliance on simple forms of online advertising as main revenue source	Use of multiple sophisticated advertising approaches and better integration of electronic commerce with existing business processes and strategies
Distribution of digital products	Widespread piracy due to ineffective distribution of digital products	New approaches to the sale and distribution of digital products
First-mover advantage	Rely on first-mover advantage to ensure success in all types of markets and industries	Realize that first-mover advantage leads to success only for some companies in certain specific markets and industries

FIGURE 1-4 Key characteristics of the first two waves of electronic commerce

The Third Wave Begins

Since about 2001, industry analysts have been predicting the emergence of mobile telephone-based commerce (often called **mobile commerce** or **m-commerce**) every year. And year after year, they were surprised that the expected development of mobile commerce did not occur. The limited capabilities of mobile telephones were a major impediment until very recently.

Mobile commerce is finally taking off with the increasingly widespread use of mobile phones that allow Internet access and smart phones. **Smart phones** are mobile phones that include a Web browser, a full keyboard, and an identifiable operating system that allows users to run various software packages. These phones are available with usage plans that include very high or even unlimited data transfers at a fixed monthly rate.

Another technological development was the introduction of tablet computers. These handheld devices are larger than a smart phone but smaller than a laptop computer. Most tablet computers (and smart phones) can connect to the Internet through a wireless phone service carrier or a local wireless network. This flexibility is important, especially if the wireless data plan restricts the amount of data that can be downloaded. The availability of these devices and the low cost of Internet connectivity have made mobile commerce possible on a large scale for the first time. Leading online business research firms, including Forrester, Coda, and ABI Research, estimate mobile commerce to be about $1 billion today but expect rapid growth to levels between $10 billion and $30 billion by 2015.

One of the most important changes brought about by fully operational handheld devices is that the Internet becomes truly available everywhere. This constant availability can change buyer behavior in many ways (discussed in Chapters 3 and 4) and it can provide new opportunities for online businesses that could not exist without such broad-based connectivity. You will learn about these opportunities for mobile commerce in Chapter 6.

In the first two waves, Internet technologies were integrated into B2B transactions and internal business processes by using bar codes and scanners to track parts, assemblies, inventories, and production status. These tracking technologies were not well integrated. Also, companies sent transaction information to each other using a patchwork of communication methods, including fax, e-mail, and EDI. In the third wave, Radio Frequency Identification (RFID) devices and smart cards are being combined with biometric technologies, such as fingerprint readers and retina scanners, to control more items and people in a wider variety of situations. These technologies are increasingly integrated with each other and with communication systems that allow companies to communicate with each other and share transaction, inventory level, and customer demand information effectively. You will learn more about how these technologies are integrated with B2B electronic commerce in Chapter 5.

The Web 2.0 technologies that enabled part of the growth in electronic commerce that occurred in the second wave will play a major role in the third wave. For example, Web sites such as Facebook and technologies such as Twitter can be used to engage in social commerce. **Social commerce** is the use of interpersonal connections online to promote or sell goods and services. Because a handheld device connected to the Internet can put a user online virtually all the time, social interactions can be used to advertise, promote, or suggest specific products or services. Internet Retailer notes that current social commerce sales are under $1 billion but expects volume to increase to $14 billion by 2015. You will learn more about social commerce in Chapter 6.

Large businesses—both existing businesses and new businesses that had obtained large amounts of capital early on—dominated the first wave. The second wave saw a major increase in the participation of small businesses (those with fewer than 200 employees) in the online economy. Still, more than 30 percent of small businesses in the United States do not have Web sites. In other parts of the world, this percentage is much higher. The third wave of electronic commerce will include the participation of a significantly larger proportion of these smaller businesses. Providing services that help smaller companies use electronic commerce will also be a substantial area of growth.

Not all of the future of electronic commerce is based on second and third wave developments. Some of the most successful first-wave companies, such as Amazon.com, eBay, and Yahoo!, continue to grow by offering increasingly innovative products and services. The third wave of electronic commerce will provide new opportunities for these businesses, too.

BUSINESS MODELS, REVENUE MODELS, AND BUSINESS PROCESSES

A **business model** is a set of processes that combine to achieve a company's primary goal, which is typically to yield a profit. In the first wave of electronic commerce, many investors tried to find start-up companies that had new, Internet-driven business models. These investors expected that the right business model would lead to rapid sales growth and market dominance. If a company was successful using a new "dot-com" business model, investors would clamor to copy that model or find a start-up company that planned to use a

similar business model. This strategy led the way to many business failures, some of them quite dramatic.

In the wake of the dot-com debacle that ended the first wave of electronic commerce, many business researchers analyzed the efficacy of this "copy a successful business model" approach and began to question the advisability of focusing great attention on a company's business model. One of the main critics, Harvard Business School professor Michael Porter, argued that business models not only did not matter, they probably did not exist. (You can read more about Porter's criticisms of the business model approach in the articles cited in the For Further Study and Research section at the end of this chapter.)

Today, most companies realize that copying or adapting someone else's business model is neither an easy nor wise road map to success. Instead, companies should examine the elements of their business; that is, they should identify business processes that they can streamline, enhance, or replace with processes driven by Internet technologies.

Companies and investors do use the idea of a **revenue model**, which is a specific collection of business processes used to identify customers, market to those customers, and generate sales to those customers. The revenue model idea is helpful for classifying revenue-generating activities for communication and analysis purposes. The details of revenue models that are used on the Web are presented in Chapter 3.

Focus on Specific Business Processes

In addition to the revenue model grouping of business processes, companies think of the rest of their operations as specific business processes. Those processes include purchasing raw materials or goods for resale, converting materials and labor into finished goods, managing transportation and logistics, hiring and training employees, managing the finances of the business, and many other activities.

An important function of this book is to help you learn how to identify those business processes that firms can accomplish more effectively by using electronic commerce technologies. In some cases, business processes use traditional commerce activities very effectively, and technology cannot improve them. Products that buyers prefer to touch, smell, or examine closely can be difficult to sell using electronic commerce. For example, customers might be reluctant to buy items that have an important element of tactile feel or condition such as high-fashion clothing (you cannot touch it online and subtle color variations that are hard to distinguish on a computer monitor can make a large difference) or antique jewelry (for which elements of condition that require close inspection can be critical to value) if they cannot closely examine the products before agreeing to purchase them.

This book will help you learn how to use Internet technologies to improve existing business processes and identify new business opportunities. An important aspect of electronic commerce is that firms can use it to help them adapt to change. The business world is changing more rapidly than ever before. Although much of this book is devoted to explaining technologies, the book's focus is on the business of electronic commerce; the technologies only enable the business processes.

Role of Merchandising

Retail merchants have years of traditional commerce experience in creating store environments that help convince customers to buy. This combination of store design, layout, and product display knowledge is called **merchandising**. In addition, many salespeople have developed skills that allow them to identify customer needs and find products or services that meet those needs.

The skills of merchandising and personal selling can be difficult to practice remotely. However, companies must be able to transfer their merchandising skills to the Web for their Web sites to be successful. Some products are easier to sell on the Internet than others because the merchandising skills related to those products are easier to transfer to the Web. You will learn more about how merchandising can be accomplished online in Chapters 3 and 4.

Product/Process Suitability to Electronic Commerce

Some products, such as books or CDs, are good candidates for electronic commerce because customers do not need to experience the physical characteristics of the particular item before they buy it. Because one copy of a new book is identical to other copies, and because the customer is not concerned about fit, freshness, or other such qualities, customers are usually willing to order a title without examining the specific copy they will receive. The advantages of electronic commerce, including the ability of one site to offer a wider selection of titles than even the largest physical bookstore, can outweigh the advantages of a traditional bookstore—for example, the customer's ability to browse the pages of the books. In later chapters, you will learn how to evaluate the advantages and disadvantages of using electronic commerce for specific business processes. Figure 1-5 lists examples of business processes categorized by suitability for electronic commerce and traditional commerce. As technologies develop, many processes that were strictly handled through traditional commerce have become more suitable for electronic commerce. This trend will likely continue. You will learn more about transitions of this type in Chapter 3.

Well Suited to Electronic Commerce	Suited to a Combination of Electronic and Traditional Commerce Strategies	Well Suited to Traditional Commerce
Sale/purchase of books and CDs	Sale/purchase of automobiles	Sale/purchase of impulse items for immediate use
Sale/purchase of goods that have strong brand reputations	Banking and financial services	Sale/purchase of used, unbranded goods
Online delivery of software and digital content, such as music and movies	Roommate-matching services	
Sale/purchase of travel services	Sale/purchase of residential real estate	
Online shipment tracking	Sale/purchase of high-value jewelry and antiques	
Sale/purchase of investment and insurance products		

FIGURE 1-5 Business process suitability to type of commerce

One business process that is especially well-suited to electronic commerce is the selling of commodity items. A **commodity item** is a product or service that is hard to distinguish from the same products or services provided by other sellers; its features have become standardized and well known. The only difference a buyer perceives when shopping for a commodity item is its price. Gasoline, office supplies, soap, computers, and

airline transportation are all examples of commodity products or services, as are the books and CDs sold by Amazon.com.

Not all commodity items are good candidates for electronic commerce. They must have an attractive shipping profile to be sold online. A product's **shipping profile** is the collection of attributes that affect how easily that product can be packaged and delivered. A high value-to-weight ratio can help by making the overall shipping cost a small fraction of the selling price. A DVD is an excellent example of an item that has a high value-to-weight ratio. Products that are consistent in size, shape, and weight can make warehousing and shipping much simpler and less costly. Commodity items that have an attractive shipping profile include books, clothing, shoes, kitchen accessories, and many other small household items.

A product that has a strong brand reputation—such as a Kodak camera—is easier to sell on the Web than an unbranded item, because the brand's reputation reduces the buyer's concerns about quality when buying that item sight unseen. Expensive jewelry has a high value-to-weight ratio, but many people are reluctant to buy it without examining it in person unless the jewelry is sold under a well-known brand name and with a generous return policy.

Other items that are well-suited to electronic commerce are those that appeal to small, but geographically dispersed, groups of customers. Collectible comic books are an example of this kind of product.

Traditional commerce, rather than electronic commerce, can be a better way to sell items that rely on personal selling skills. For example, sales of commercial real estate involve large amounts of money and a high degree of interpersonal trust. Even if commercial real estate is listed online, it will usually require personal contact to negotiate the deal. Many businesses are using a combination of personal contact enhanced by an online presence to sell items such as high-fashion clothing, antiques, or specialized food items.

A combination of electronic and traditional commerce strategies works best when the business process includes both commodity and personal inspection elements. For example, most people find information on the Web about new and used automobiles and do considerable research on specific makes and models before they visit a dealership to buy. In the case of used cars, electronic commerce provides a good way for buyers to obtain information about available models, features, reliability, prices, and dealerships, and also helps buyers find specific vehicles that meet their exact requirements. The range of conditions of used cars makes the traditional commerce component of personal inspection a key part of the transaction negotiation.

ELECTRONIC COMMERCE: OPPORTUNITIES, CAUTIONS, AND CONCERNS

Electronic commerce has changed the way business is conducted in many industries. However, not every business process is suitable for electronic commerce. As technologies advance, more and more types of business processes become candidates for electronic commerce. This section outlines some opportunities and points out some cautions that businesses should consider in evaluating opportunities to engage in online business activities.

Opportunities for Electronic Commerce

Electronic commerce is attractive to businesses because, quite simply, it can help increase profits. It can do this because electronic commerce can increase sales and decrease business costs. Advertising done well on the Web can get even a small firm's

promotional message out to potential customers in every country in the world. A firm can use electronic commerce to reach small groups of customers that are geographically scattered. The Web is particularly useful in creating virtual communities that become ideal target markets for specific types of products or services. A **virtual community** is a gathering of people who share a common interest, but instead of this gathering occurring in the physical world, it takes place on the Internet. In recent years, virtual communities have taken advantage of Web 2.0 technologies to make their activities more accessible and interesting to community members. Thomas Petzinger has written extensively in his *Wall Street Journal* newspaper columns and his book, *The New Pioneers*, about new patterns of work and commerce that have evolved from these virtual communities. You will learn about Web sites (called **social networking sites**) that individuals and businesses use to conduct social interactions online and the business opportunities they present in Chapter 6.

Just as electronic commerce increases sales opportunities for the seller, it also increases purchasing opportunities for the buyer. Businesses can use electronic commerce to identify new suppliers and business partners. Negotiating price and delivery terms is easier in electronic commerce because the Internet can help companies efficiently obtain competitive bid information. Electronic commerce increases the speed and accuracy with which businesses can exchange information, which reduces costs on both sides of transactions. Many companies are reducing their costs of handling sales inquiries, providing price quotes, and determining product availability by using electronic commerce in their sales support and order-taking processes.

Cisco Systems, a leading manufacturer of computer networking equipment, currently sells almost all its products online. Because no customer service representatives are involved in making these sales, Cisco operates very efficiently. In 1998, the first year in which its online sales initiative was operational, Cisco made 72 percent of its sales on the Web. Cisco avoided handling 500,000 calls per month and saved $500 million in that first year. Today, Cisco conducts more than 99 percent of its purchase and sales transactions online.

Electronic commerce provides buyers with a wider range of choices than traditional commerce because buyers can consider many different products and services from a wider variety of sellers. This wide variety is available for consumers to evaluate 24 hours a day, every day. Some buyers prefer a great deal of information in deciding on a purchase; others prefer less. Electronic commerce provides buyers with an easy way to customize the level of detail in the information they obtain about a prospective purchase. Instead of waiting days for the mail to bring a catalog or product specification sheet, or even minutes for a fax transmission, buyers can have instant access to detailed information on the Web. Allowing customers to create their own ideal information environment saves money and provides an opportunity for increased sales.

Most digital products, such as software, music, video, or images, can be delivered through the Internet to reduce the time buyers must wait to begin using their purchases. The ability to deliver digital products online is not just a cost-reduction strategy; it can provide an opportunity for increased sales. Intuit sells its TurboTax income tax preparation software online and lets customers download the software immediately if they wish. Intuit sells a considerable amount of TurboTax software late in the evening on April 14 each year. (April 15 is the deadline for filing personal income tax returns in the United States.)

The benefits of electronic commerce extend to the general welfare of society. Electronic payments of tax refunds, public retirement, and welfare support cost less to issue and arrive securely and quickly when transmitted over the Internet. Furthermore, electronic payments can be easier to audit and monitor than payments made by check,

providing protection against fraud and theft losses. To the extent that electronic commerce enables people to telecommute, everyone benefits from the reduction in commuter-caused traffic and pollution. Electronic commerce can also make products and services available in remote areas. For example, distance learning makes it possible for people to learn skills and earn degrees no matter where they live or which hours they have available for study.

Electronic Commerce: Cautions and Concerns

Some business processes might never lend themselves to electronic commerce. For example, perishable foods and high-cost, unique items such as custom-designed jewelry can be very difficult to inspect adequately from a remote location, regardless of any technologies that might be devised in the future. Most of the cautions and concerns regarding electronic commerce today, however, stem from the rapidly developing pace of the underlying technologies and the reluctance of people to change the way they do things. These barriers have disappeared for many types of online business and will continue to disappear as electronic commerce matures and becomes more generally accepted.

The Need for a Critical Mass

Some products and services require that a critical mass of potential buyers be equipped and willing to buy through the Internet. For example, online grocers such as **Peapod** initially offered their delivery services only in a few cities. As more of Peapod's potential customers became connected to the Internet and felt comfortable with purchasing online, the company was able to expand slowly and carefully into more geographic areas. After more than 10 years of operation, Peapod operates in fewer than 20 U.S. metropolitan areas. Most online grocers focus their sales efforts on packaged goods and branded items. Perishable grocery products, such as fruit and vegetables, are much harder to sell online because customers want to examine and select specific items for freshness and quality. Peapod is a good example of how challenging it can be to build a business in an industry that requires this kind of critical mass. Although it was one of the first online grocery stores, Peapod has had a difficult time staying in business, and was even offline for a short time in 2000. Peapod was subsequently acquired by Royal Ahold, a European firm that was willing to invest additional cash to keep it in operation. Two of Peapod's major competitors, WebVan and HomeGrocer, were unable to stay in business long enough to attract a sufficient customer base.

Established traditional grocery chains in the United States such as **Safeway** also offer online ordering and delivery services in a second wave of using Internet technologies in the grocery business. By using their existing infrastructure (including warehouses, purchasing systems, and physical stores in multiple locations), they are able to avoid having to make the large capital investment in facilities that led to the demise of first-wave dot-com grocers such as WebVan and HomeGrocer.

One online grocer that has successfully implemented an updated version of the WebVan and HomeGrocer operational approach is **FreshDirect**. By limiting its service area to the densely populated region in and around New York City, FreshDirect has found the right combination of operating scale and market. The company started in 2002 and achieved profitability in 2004 with sales of $90 million. This is a much smaller sales volume than either WebVan or HomeGrocer would have needed to be profitable.

Outside the United States, online grocers have done quite well. Three of the most successful online grocery efforts in the world are **Grocery Gateway** in Toronto, **Disco Virtual** in Buenos Aires, and **Tesco** in the United Kingdom. Grocery Gateway and Disco Virtual

operate in densely populated urban environments that offer sufficiently large numbers of customers within relatively small geographic areas, which make their delivery routes profitable. Tesco started its operations in London, which offers a similar densely populated urban area. However, Tesco has also expanded its operations to selected rural areas that are near a Tesco supermarket.

Predictability of Costs and Revenues

Businesses often calculate return-on-investment numbers before committing to any new technology. This has been difficult to do for investments in electronic commerce because the costs and benefits are often hard to quantify or predict with any degree of accuracy. Costs that are a function of technology can change dramatically even during a short-lived online business implementation project because the underlying technologies are changing so rapidly.

Many firms have had trouble recruiting and retaining employees with the technological, design, or business process skills needed to take their business online. Larger firms often try to use existing personnel who are steeped in traditional ways of doing business. These employees often have difficulty adapting what they have learned about the business to an online environment in which the risks and benefits are often very different. You will learn more about return-on-investment calculations and employee recruitment and retention issues in Chapter 12.

Technology Integration Issues

Another problem facing firms that want to do business on the Internet is the difficulty of integrating existing databases and transaction-processing software designed for traditional commerce into the software that enables electronic commerce. Although a number of companies offer software design and consulting services that promise to tie existing systems into new online business systems, these services can be expensive. The outcome of any systems integration effort can be highly uncertain as well. You will learn more about how companies deal with these software issues in Chapter 9.

Cultural and Legal Concerns

In addition to technology and software issues, many businesses face cultural and legal obstacles to conducting all types of electronic commerce. B2C electronic commerce must deal with the fact that many consumers are still fearful of sending their credit card numbers over the Internet and having online merchants—merchants they have never met—know so much about them. Other consumers are simply resistant to change and are uncomfortable viewing merchandise on a computer screen rather than in person.

B2B electronic commerce is also affected by cultural and legal considerations. The details of business transactions are often not specified; businesses frequently rely on a long history of doing business a particular way. These established business practices can vary greatly from country to country and making assumptions when engaging in international commerce can be disastrous. You will learn more about electronic commerce security, privacy issues, and payment systems later in this book.

The legal environment in which electronic commerce is conducted is full of unclear and conflicting laws. In many cases, government regulators have not kept up with technologies. As you will learn in Chapter 7, laws that govern commerce were written when signed documents were a reasonable expectation in any business transaction. However, as more businesses and individuals find the benefits of electronic commerce to be compelling, many of these technology- and culture-related disadvantages will be resolved or seem less problematic.

LEARNING FROM FAILURES

Pets.com

In February 1999, Pets.com launched its Web site with the hopes of making substantial sales to the 60 percent of U.S. households that own pets and spend more than $20 billion each year feeding, entertaining, and caring for them. More than 10,000 stores sold pet supplies. These stores included small retail outlets, grocery stores, discount retailers (such as Wal-Mart and Costco), and a new generation of pet superstores. Pets.com had acquired an excellent domain name and intended to exploit the opportunities presented by high levels of investor interest in funding electronic commerce companies. The plan for Pets.com was to spend heavily to develop a brand and a Web presence that would rapidly make the company the premier online source for pet-related products.

After launching the site, Pets.com raised $110 million from private investors in 1999, and another $80 million in a public sale of stock in early 2000. Pets.com spent more than $100 million of the money on advertising during its short life. It also spent significant sums to create a Web store that offered more than 12,000 different products. In November 2000—less than two years after launching its Web site—Pets.com went out of business.

Pets.com had created an electronic commerce initiative in an industry in which online business offered few advantages over traditional commerce. The products had a very low value-to-weight ratio. The shipping costs for pet food, one of the company's best-selling product categories, caused it to lose money on every sale. Pet products come in all shapes, sizes, and weights, and are, therefore, difficult to pack and ship efficiently. Pets.com was also spending money rapidly at a time when investors were beginning to question the long-run viability of all electronic commerce businesses. The lesson here is that Pets.com could not develop any sustainable advantage over traditional pet stores. Without such an advantage, the business was doomed.

In the years following the Pets.com failure, a number of companies such as **PETCO** and **PetFoodDirect.com** began selling pet food and related items online. These companies were more careful than Pets.com was about what they offered for sale. By selling only items that had an appropriate shipping profile, many of these companies have now become successful. For example, veterinarians who formulate foods that meet the needs of specific pet diets are finding they can charge enough for those products to make online sales profitable.

ECONOMIC FORCES AND ELECTRONIC COMMERCE

Economics is the study of how people allocate scarce resources. One important way that people allocate resources is through commerce (the other major way is through government actions, such as taxes or subsidies). Many economists are interested in how people organize their commerce activities. One way people do this is to participate in markets. Economists use a formal definition of **market** that includes two conditions: first, that the potential sellers of a good come into contact with potential buyers, and second, that a medium of exchange is available. This medium of exchange can be currency or barter. Most economists agree that markets are strong and effective mechanisms for allocating scarce resources. Thus, one would expect most business transactions to occur within markets. However, much business activity today occurs within large **hierarchical business organizations**, which economists generally refer to as **firms**, or **companies**.

Most hierarchical organizations are headed by a top-level president or chief operating officer. Reporting to the president are a number of executives who, in turn, have a larger number of middle managers who report to them, and so on. An organization can have a relatively flat hierarchy, in which there are only a few levels of management, or it can have many reporting levels. In either case, the bottom level includes the largest number of employees and is usually made up of production workers or service providers. Thus, the hierarchical organization always has a pyramid-shaped structure.

These large firms often conduct many different business activities entirely within the organizational structure of the firm and participate in markets only for purchasing raw materials and selling finished products. If markets are indeed highly effective mechanisms for allocating scarce resources, these large corporations should participate in markets at every stage of their production and value-generation processes. Nobel laureate Ronald Coase wrote an essay in 1937 in which he questioned why individuals who engaged in commerce often created firms to organize their activities. He was particularly interested in the hierarchical structure of these business organizations. Coase concluded that transaction costs were the main motivation for moving economic activity from markets to hierarchically structured firms.

Transaction Costs

Transaction costs are the total of all costs that a buyer and seller incur as they gather information and negotiate a purchase-and-sale transaction. Although brokerage fees and sales commissions can be a part of transaction costs, the cost of information search and acquisition is often far larger. Another significant component of transaction costs can be the investment a seller makes in equipment or in the hiring of skilled employees to supply the product or service to the buyer.

To understand better how transaction costs occur in markets, consider the following example: A sweater dealer could obtain sweaters by engaging in market transactions with a number of independent sweater knitters. Each knitter could sell sweaters to one or several dealers. Transaction costs incurred by the dealer would include the costs of identifying the independent knitters, visiting them to negotiate the purchase price, arranging for delivery of the sweaters, and inspecting the sweaters on arrival. The knitters would also incur costs, such as the purchase of knitting supplies. Because individual knitters could not know whether any sweater dealer would ever buy sweaters from them, the investments they make to enter the sweater-knitting business have an uncertain yield. This risk is a significant transaction cost for the knitters.

After purchasing the sweaters, sweater dealers take them to a different market in which sweater dealers meet and do business with the retail shops that sell sweaters to the consumer. The dealers can learn which colors, patterns, and styles are in demand from price and quantity negotiations with the retail shops in this market. The sweater dealers can then use that information to negotiate price and other terms in the knitters' market. A diagram of this set of markets appears in Figure 1-6.

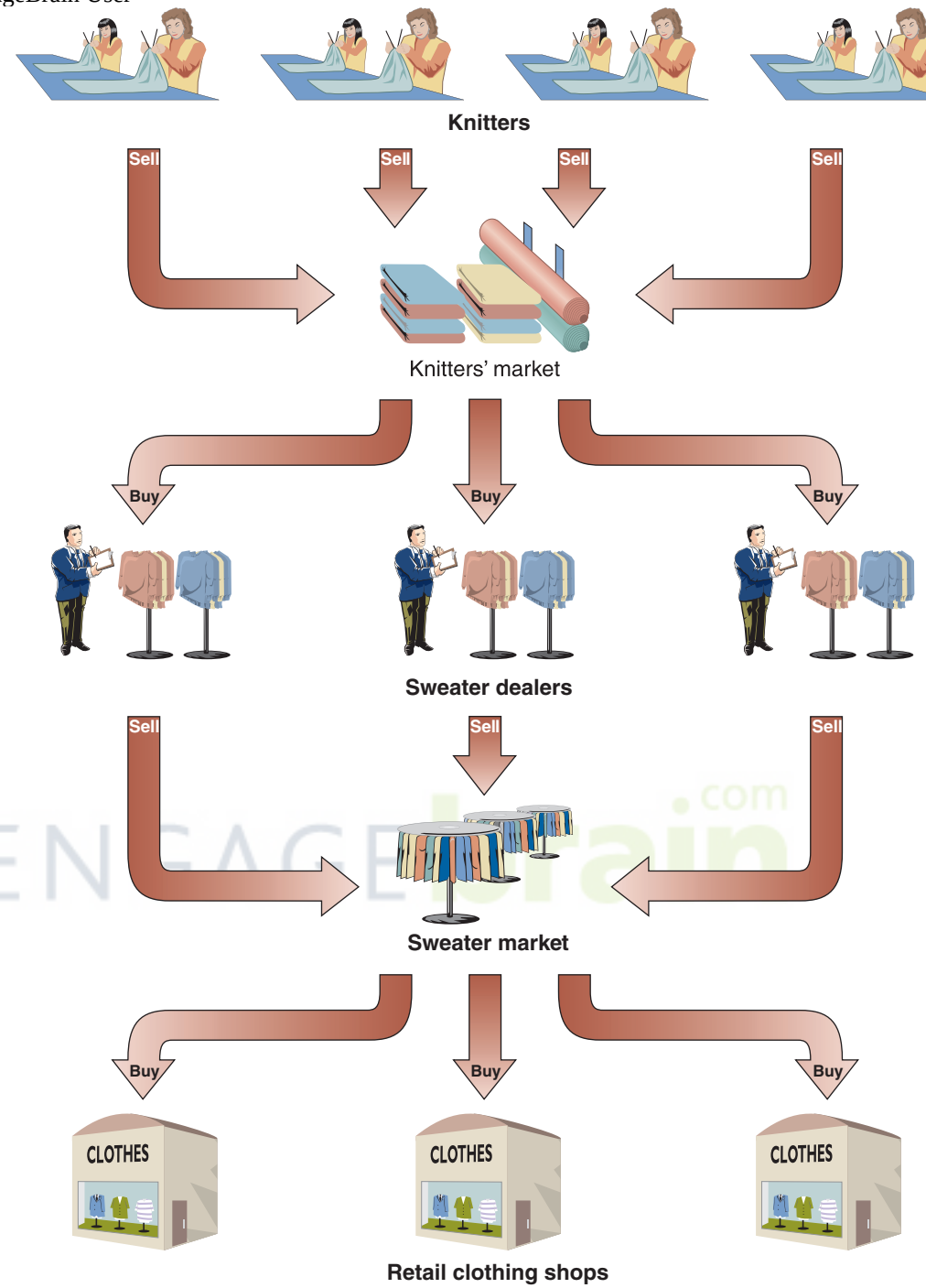


FIGURE 1-6 Market form of economic organization

Markets and Hierarchies

Coase reasoned that when transaction costs were high, businesspeople would form organizations to replace market-negotiated transactions. These organizations would be hierarchical and would include strong supervision and worker-monitoring elements.

Instead of negotiating with individuals to purchase sweaters they had knit, a hierarchical organization would hire knitters, and then supervise and monitor their work activities. This supervision and monitoring system would include flows of monitoring information from the lower levels to the higher levels of the organization. It would also have control of information flowing from the upper levels of the organization to the lower levels. Although the costs of creating and maintaining a supervision and monitoring system are high, they can be lower than transaction costs in many instances.

In the sweater example, the sweater dealer would hire knitters, supply them with yarn and knitting tools, and supervise their knitting activities. This supervision could be done mainly by first-line supervisors, who might be drawn from the ranks of the more skilled knitters. The practice of an existing firm replacing one or more of its supplier markets with its own hierarchical structure for creating the supplied product is called **vertical integration**. Figure 1-7 shows how the sweater example would look after the knitters and the individual sweater dealers were vertically integrated into the hierarchical structure of a single sweater dealer.

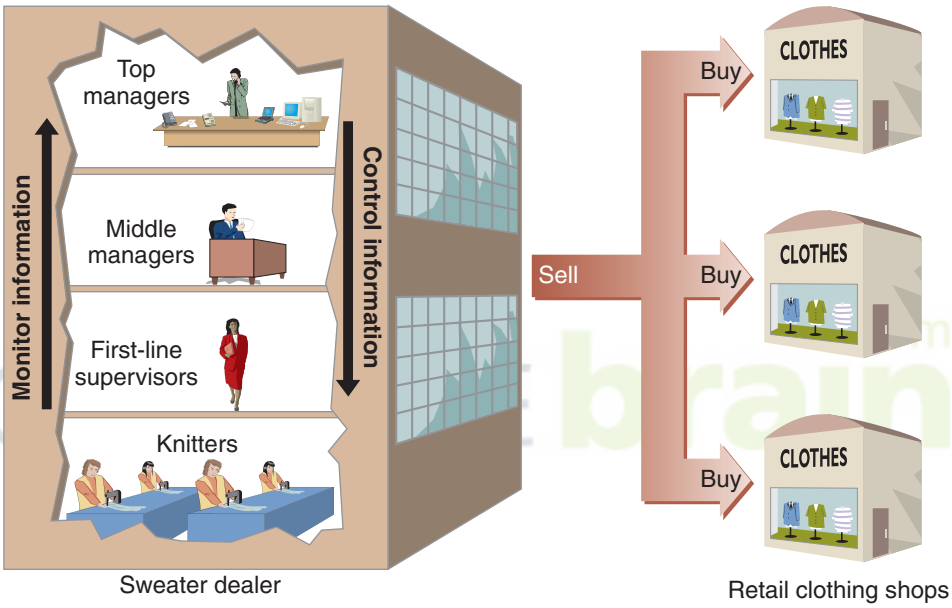


FIGURE 1-7 Hierarchical form of economic organization

Oliver Williamson, an economist who extended Coase's analysis, noted that firms in industries with complex manufacturing and assembly operations tended to be hierarchically organized and vertically integrated. Many of the manufacturing and administrative innovations that occurred in businesses during the twentieth century increased the efficiency and effectiveness of hierarchical monitoring activities. Assembly lines and other mass production technologies allowed work to be broken down into small, easily supervised procedures. The advent of computers brought tremendous increases in the ability of upper-level managers to monitor and control the detailed activities of their

subordinates. Some of these direct measurement techniques are even more effective than the first-line supervisors on the shop floor.

During the years from the Industrial Revolution through the present, improvements in monitoring became commonplace and the size and level of vertical integration of firms have increased. In some very large organizations, however, monitoring systems have not kept pace with the organization's increase in size. This has created problems because the economic viability of a firm depends on its ability to track operational activities effectively at the lowest levels of the firm. These firms have instituted decentralization programs that allow business units to function as separate organizations, negotiating transactions with other business units as if they were operating in a market rather than as part of the same firm. Economists argue that large companies decentralize because they have grown too large to be managed effectively as hierarchical structures, so their managers need the information provided by market mechanisms.

To expose their decentralized operations to market mechanisms, these companies allow their divisions to operate as independent business units. A **strategic business unit (SBU)**, or simply **business unit**, is an autonomous part of a company that is large enough to manage itself but small enough to respond quickly to changes in its business environment. SBUs have their own mission and objectives; therefore, they have their own strategies for marketing, product development, purchasing, and long-term growth. General Electric, one of the largest companies in the world, has used SBUs to handle its diverse business operations since the 1960s. For example, General Electric makes both jet engines and light bulbs. These two businesses have different products, distribution channels, and customer types; therefore, they require different objectives, product development strategies, marketing plans, and manufacturing operations. General Electric's Jet Engine Division and Light Bulb Division operate as separate SBUs. Although an SBU operates as a participant in a market (rather than as part of the hierarchical structure of the owning company), the SBU itself is organized internally as a hierarchy.

Exceptions to the general trend toward hierarchies do exist. Many commodities, such as wheat, sugar, and crude oil, are still traded in markets. The commodity nature of the products traded in these markets significantly reduces transaction costs. There are a large number of potential buyers for an agricultural commodity such as wheat, and farmers do not make any special investment in customizing or modifying the product for particular customers. Thus, neither buyers nor sellers in commodity markets experience significant transaction costs.

Using Electronic Commerce to Reduce Transaction Costs

Businesses and individuals can use electronic commerce to reduce transaction costs by improving the flow of information and increasing the coordination of actions. By reducing the cost of searching for potential buyers and sellers and increasing the number of potential market participants, electronic commerce can change the attractiveness of vertical integration for many firms.

To see how electronic commerce can change the level and nature of transaction costs, consider an employment transaction. The agreement to employ a person has high transaction costs for the seller—the employee who sells his or her services. These transaction costs include a commitment to forego other employment and career

development opportunities. Individuals make a high investment in learning and adapting to the culture of their employers. If accepting the job involves a move, the employee can incur very high costs, including actual costs of the move and related costs, such as the loss of a spouse's job. Much of the employee's investment is specific to a particular job and location; the employee cannot transfer the investment to a new job.

If a sufficient number of employees throughout the world can telecommute, then many of these transaction costs could be reduced or eliminated. Instead of uprooting a spouse and family to move, a worker could accept a new job by simply logging on to a different company server!

Network Economic Structures

Some researchers argue that many companies and strategic business units operate today in an economic structure that is neither a market nor a hierarchy. In this **network economic structure**, companies coordinate their strategies, resources, and skill sets by forming long-term, stable relationships with other companies and individuals based on shared purposes. These relationships are often called **strategic alliances** or **strategic partnerships**, and when they occur between or among companies operating on the Internet, these relationships are also called **virtual companies**.

In some cases, these entities, called **strategic partners**, come together as a team for a specific project or activity. The team dissolves when the project is complete; however, the partners maintain contact with each other through the ensuing period of inactivity. When the need for a similar project or activity arises, the same organizations and individuals build teams from their combined resources. In other cases, the strategic partners form many intercompany teams to undertake a variety of ongoing activities. Later in this book, you will see many examples of strategic partners creating alliances of this sort on the Web. In a hierarchically structured business environment, these types of strategic alliances would not last very long because the larger strategic partners would buy out the smaller partners and form a larger single company.

Network organizations are particularly well suited to technology industries that are information intensive. In the sweater example, the knitters might organize into networks of smaller organizations that specialize in certain styles or designs. Some of the particularly skilled knitters might leave the sweater dealer to form their own company to produce custom-knit sweaters. Some of the sweater dealer's marketing employees might form an independent firm that conducts market research on what the retail shops plan to buy in the upcoming months. This firm could sell its research reports to both the sweater dealer and the custom-knitting firm. As market conditions change, these smaller and more nimble organizations could continually reinvent themselves and take advantage of new opportunities that arise in the sweater markets. An illustration of such a network organization appears in Figure 1-8.

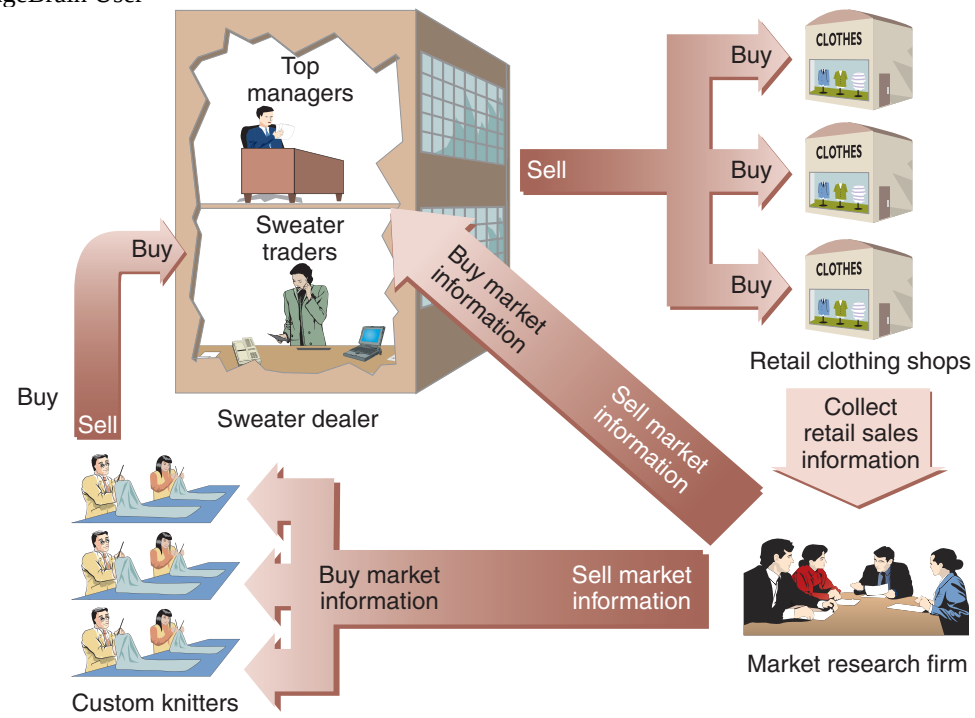


FIGURE 1-8 Network form of economic organization

Electronic commerce can make such networks, which rely extensively on information sharing, much easier to construct and maintain. Some researchers believe that these network forms of organizing commerce will become predominant in the near future. One of these researchers, Manuel Castells, even predicts that economic networks will become the organizing structure for all social interactions among people.

Network Effects

Economists have found that most activities yield less value as the amount of consumption increases. For example, a person who consumes one hamburger obtains a certain amount of value from that consumption. As the person consumes more hamburgers, the value provided by each hamburger decreases. Few people find the fifth hamburger as enjoyable as the first. This characteristic of economic activity is called the **law of diminishing returns**. In networks, an interesting exception to the law of diminishing returns occurs. As more people or organizations participate in a network, the value of the network to each participant increases. This increase in value is called a **network effect**.

To understand how network effects work, consider an early user of the telephone in the 1800s. When telephones were first introduced, few people had them. The value of each telephone increased as more people had them installed. As the network of telephones grew, the capability of each individual telephone increased because it could be used to communicate with more people. This increase in the value of each telephone as more and more telephones are able to connect to each other is the result of a network effect. Imagine how much less useful (and therefore, less valuable) your mobile phone today would be if you could only use it to talk with other people who had the same mobile phone carrier.

Your e-mail account, which gives you access to a network of other people with e-mail accounts, is another example of a network effect. If your e-mail account were part of a small network, it would be less valuable than it is. Most people today have e-mail accounts that are part of the Internet (a global network of computers, about which you will learn more in Chapter 2). In the early days of e-mail, most e-mail accounts only connected people in the same company or organization. Internet e-mail accounts are far more valuable than single-organization e-mail accounts because of the network effect.

Regardless of how businesses in a particular industry organize themselves—as markets, hierarchies, or networks—you need a way to identify business processes and evaluate whether electronic commerce is suitable for each process. The next section presents one useful structure for examining business processes.

IDENTIFYING ELECTRONIC COMMERCE OPPORTUNITIES

Internet technologies can be used to improve so many business processes that it can be difficult for managers to decide where and how to use them. One way to focus on specific business processes as candidates for electronic commerce is to break the business down into a series of value-adding activities that combine to generate profits and meet other goals of the firm. In this section, you will learn one popular way to analyze business activities as a sequence of activities that create value for the firm.

Commerce is conducted by firms of all sizes. Smaller firms might focus on one product, distribution channel, or type of customer. Larger firms often sell many different products and services through a variety of distribution channels to several types of customers. In these larger firms, managers organize their work around the activities of strategic business units. Multiple business units owned by a common set of shareholders make up a firm, or company, and multiple firms that sell similar products to similar customers make up an **industry**.

Strategic Business Unit Value Chains

In his 1985 book, *Competitive Advantage*, Michael Porter introduced the idea of value chains. A **value chain** is a way of organizing the activities that each strategic business unit undertakes to design, produce, promote, market, deliver, and support the products or services it sells. In addition to these **primary activities**, Porter also includes **supporting activities**, such as human resource management and purchasing, in the value chain model. Figure 1-9 shows a value chain for a strategic business unit, including both primary and supporting activities. These value chain activities will occur in some form in any strategic business unit.

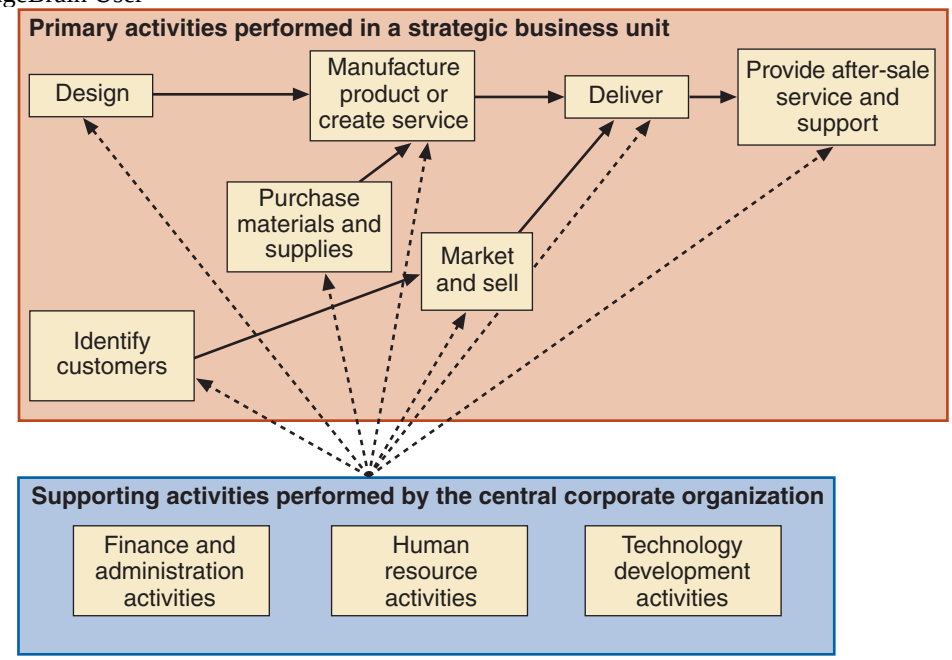


FIGURE 1-9 Value chain for a strategic business unit

The left-to-right flow in Figure 1-9 does not imply a strict time sequence for these processes. For example, a business unit might engage in marketing activities before purchasing materials and supplies. Each strategic business unit conducts the following primary activities:

- *Design*: activities that take a product from concept to manufacturing, including concept research, engineering, and test marketing
- *Identify customers*: activities that help the firm find new customers and new ways to serve existing customers, including market research and customer satisfaction surveys
- *Purchase materials and supplies*: procurement activities, including vendor selection, vendor qualification, negotiating long-term supply contracts, and monitoring quality and timeliness of delivery
- *Manufacture product or create service*: activities that transform materials and labor into finished products, including fabricating, assembling, finishing, testing, and packaging
- *Market and sell*: activities that give buyers a way to purchase and that provide inducements for them to do so, including advertising, promoting, managing salespeople, pricing, and identifying and monitoring sales and distribution channels

- *Deliver*: activities that store, distribute, and ship the final product or provide the service, including warehousing, handling materials, consolidating freight, selecting shippers, and monitoring timeliness of delivery
- *Provide after-sale service and support*: activities that promote a continuing relationship with the customer, including installing, testing, maintaining, repairing, fulfilling warranties, and replacing parts

The importance of each primary activity depends on the product or service the business unit provides and to which customers it sells. Each business unit must also have support activities that provide the infrastructure for the unit's primary activities. The central corporate organization typically provides the support activities that appear in Figure 1-9. These activities include the following:

- *Finance and administration activities*: providing the firm's basic infrastructure, including accounting, paying bills, borrowing funds, reporting to government regulators, and ensuring compliance with relevant laws
- *Human resource activities*: coordinating the management of employees, including recruiting, hiring, training, compensation, and managing benefits
- *Technology development activities*: improving the product or service that the firm is selling and that helps improve the business processes in every primary activity, including basic research, applied research and development, process improvement studies, and field tests of maintenance procedures

Industry Value Chains

Porter's book also identifies the importance of examining where the strategic business unit fits within its industry. Porter uses the term **value system** to describe the larger stream of activities into which a particular business unit's value chain is embedded. However, many subsequent researchers and business consultants have used the term **industry value chain** when referring to value systems. When a business unit delivers a product to its customer, that customer might use the product as purchased materials in its value chain. By becoming aware of how other business units in the industry value chain conduct their activities, managers can identify new opportunities for cost reduction, product improvement, or channel reconfiguration.

Every product or service has an industry value chain that can be identified and analyzed for these opportunities. To create an industry value chain, start with the inputs to your SBU and work backward to identify your suppliers' suppliers, then the suppliers of those suppliers, and so on. Then start with your customers and work forward to identify your customers' customers, then the customers of those customers, and so on.

An example of an industry value chain appears in Figure 1-10. This value chain is for a wooden chair and traces the life of the product from its inception as trees in a forest to its grave in a landfill or at a sawdust recycler.

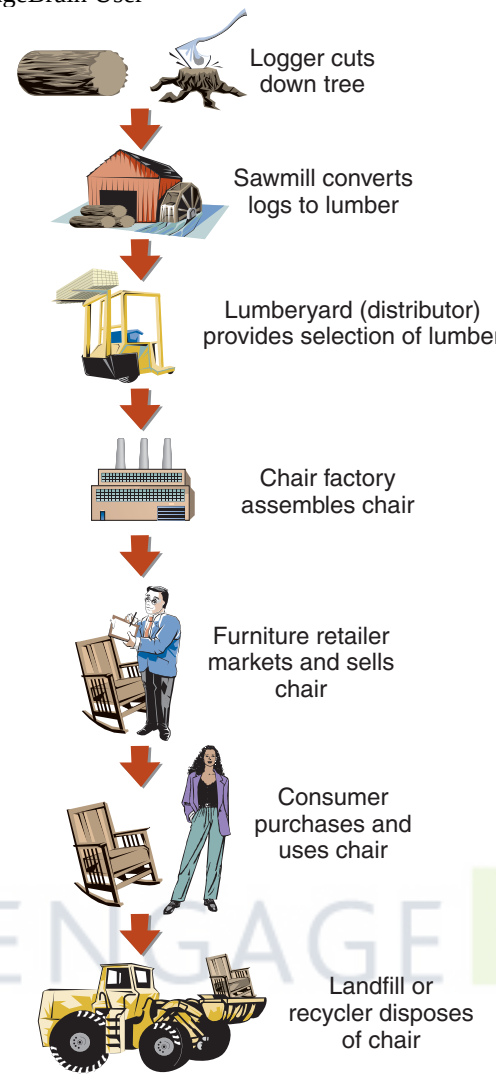


FIGURE 1-10 Industry value chain for a wooden chair

Each business unit (logger, sawmill, lumberyard, chair factory, retailer, consumer, and recycler) shown in Figure 1-10 has its own value chain. For example, the sawmill purchases logs from the tree harvester and combines them in its manufacturing process with inputs, such as labor and saw blades, from other sources. Among the sawmill customers are the chair factory, shown in Figure 1-10, and other users of cut lumber. Examining this industry value chain could be useful for the sawmill that is considering entering the tree-harvesting business or the furniture retailer who is thinking about partnering with a trucking line. The industry value chain identifies opportunities up and down the product's life cycle for increasing the efficiency or quality of the product.

As they examine their industry value chains, many managers are finding that they can use electronic commerce and Internet technologies to reduce costs, improve product quality, reach new customers or suppliers, and create new ways of selling existing products. For example, a software developer who releases annual updates to programs might consider removing the software retailer from the distribution channel for software updates by offering to send the updates through the Internet directly to the consumer.

This change would modify the software developer's industry value chain and would provide an opportunity for increasing sales revenue (the software developer could retain the margin that a retailer would have added to the price of the update), but it would not appear as part of the software developer business unit value chain. By examining elements of the value chain outside the individual business unit, managers can identify many business opportunities, including those that can be exploited using electronic commerce.

The value chain concept is a useful way to think about business strategy in general. When firms are considering electronic commerce, the value chain can be an excellent way to organize the examination of business processes within their business units and in other parts of the product's life cycle. Using the value chain reinforces the idea that electronic commerce should be a business solution, not a technology implemented for its own sake.

SWOT Analysis: Evaluating Business Unit Opportunities

Now that you have learned about industry value chains and SBUs, you can learn one popular technique for analyzing and evaluating business opportunities. Most electronic commerce initiatives add value by either reducing transaction costs, creating some type of network effect, or a combination of both. In **SWOT analysis** (the acronym is short for strengths, weaknesses, opportunities, and threats), the analyst first looks into the business unit to identify its strengths and weaknesses. The analyst then reviews the environment in which the business unit operates and identifies opportunities presented by that environment and the threats posed by that environment. Figure 1-11 shows questions that an analyst would ask in conducting a SWOT analysis for any company or SBU.

FIGURE 1-11 SWOT analysis questions

By considering all of the issues that it faces in a systematic way, a business unit can formulate strategies to take advantage of its opportunities by building on its strengths, avoiding any threats, and compensating for its weaknesses.

In the mid-1990s, **Dell Computer** used a SWOT analysis to create a business strategy that helped it become a strong competitor in its industry value chain. Dell identified its

strengths in selling directly to customers and in designing its computers and other products to reduce manufacturing costs. It acknowledged the weakness of having no relationships with local computer dealers. Dell faced threats from competitors such as Compaq (now a part of Hewlett-Packard) and IBM, both of which had much stronger brand names and reputations for quality at that time. Dell identified an opportunity by noting that its customers were becoming more knowledgeable about computers and could specify exactly what they wanted without having Dell salespeople answer questions or develop configurations for them. It also saw the Internet as a potential marketing tool. Dell carefully considered and answered the SWOT analysis questions shown in Figure 1-11. The results of Dell's SWOT analysis appear in Figure 1-12.

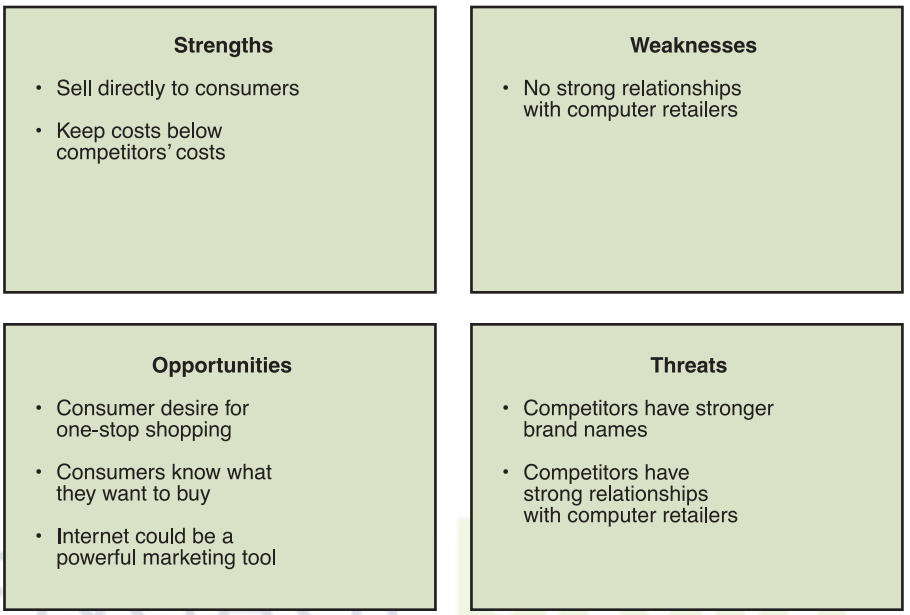


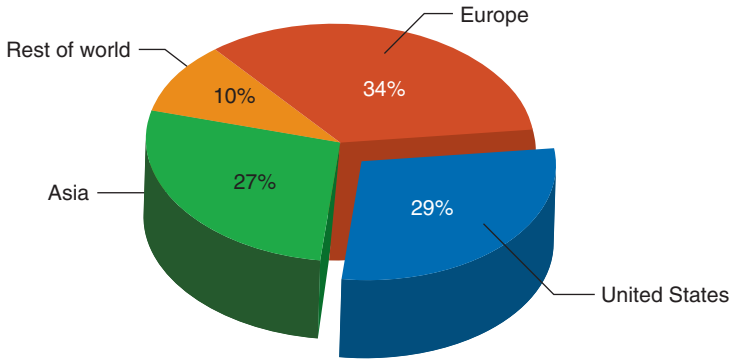
FIGURE 1-12 Results of Dell's SWOT analysis

The strategy that Dell followed after doing the analysis took all four of the SWOT elements into consideration. Dell decided to offer customized computers built to order and sold over the phone, and eventually, over the Internet. Dell's strategy capitalized on its strengths and avoided relying on a dealer network. The brand and quality threats posed by Compaq and IBM were lessened by Dell's ability to deliver higher perceived quality because each computer was custom made for each buyer. Ten years later, Dell observed that the environment of personal computer sales had changed and did start selling computers through dealers.

INTERNATIONAL NATURE OF ELECTRONIC COMMERCE

Because the Internet connects computers all over the world, any business that engages in electronic commerce instantly becomes an international business, with exposure to potential customers in other countries and cultures. When companies use the Web to improve a business process, they are automatically operating in a global environment. The first wave of electronic commerce was dominated by U.S. businesses. In the second wave, European and Asian businesses expanded online. Today, a rapidly increasing proportion

of online business activity is based outside the United States. Figure 1-13 shows the proportions of online B2C sales that arise in the main geographic regions of the world.



Source: Internet Retailer report of Goldman Sachs estimates
http://www.internetretailer.com/trends/sales/

FIGURE 1-13 Proportion of online B2C sales by geographic region, 2010

Asian online markets are growing at the most rapid pace, with sales expected to double by 2014. Although much of the online sales activity in each of the world regions depicted in the figure is intraregion, an increasing proportion of online business involves companies making sales across multiple international boundaries. The key issues that a company faces when it conducts international commerce include trust, culture, language, government, and infrastructure. These topics are covered in the following sections. The related issues of international law and currency conversion are covered in Chapter 7.

Trust Issues on the Web

It is important for all businesses to establish trusting relationships with their customers. Companies with established reputations in the physical world often create trust by ensuring that customers know who they are. These businesses can rely on their established brand names to create trust on the Web. New companies that want to establish online businesses face a more difficult challenge because a kind of anonymity exists for companies trying to establish a Web presence.

For example, a U.S. bank can establish a Web site that offers services throughout the world. No potential customer visiting the site can determine just how large or well established the bank is simply by browsing through the site's pages. Because Web site visitors will not become customers unless they trust the company behind the site, a plan for establishing credibility is essential. Sellers on the Web cannot assume that visitors will know that the site is operated by a trustworthy business.

Customers' inherent lack of trust in "strangers" on the Web is logical and to be expected; after all, people have been doing business with their neighbors—not strangers—for thousands of years. When a company grows to become a large corporation with multinational operations, its reputation grows commensurately. Before a company can do business in dozens of countries, it must prove its trustworthiness by satisfying customers

for many years as it grows. Businesses on the Web must find ways to overcome this well-founded tradition of distrusting strangers, because today a company can incorporate one day and, through the Web, be doing business the next day with people all over the world. For businesses to succeed on the Web, they must find ways to quickly generate the trust that traditional businesses take years to develop.

Language Issues

Most companies realize that the only way to do business effectively in other cultures is to adapt to those cultures. The phrase "think globally, act locally" is often used to describe this approach. The first step that a Web business usually takes to reach potential customers in other countries, and thus in other cultures, is to provide local language versions of its Web site. This may mean translating the Web site into another language or regional dialect. Researchers have found that customers are far more likely to buy products and services from Web sites in their own language, even if they can read English well. Only about 400 million of the world's 7 billion people learned English as their native language.

Researchers estimate that about 50 percent of the content available on the Internet today is in English, but more than half of current Internet users do not read English. Industry analysts estimate that by 2015, more than 90 percent of Internet users will be outside the United States, and 70 percent of electronic commerce transactions will involve at least one party located outside the United States.

Some languages require multiple translations for separate dialects. For example, the Spanish spoken in Spain is different from that spoken in Mexico, which is different from that spoken elsewhere in Latin America. People in parts of Argentina and Uruguay use yet a fourth dialect of Spanish. Many of these dialect differences are spoken inflections, which are not important for Web site designers (unless, of course, their sites include audio or video elements); however, a significant number of differences occur in word meanings and spellings. You might be familiar with these types of differences, because they occur in the U.S. and British dialects of English. The U.S. spelling of *gray* becomes *grey* in Great Britain, and the meaning of *bonnet* changes from a type of hat in the United States to an automobile hood in Great Britain. Chinese has two main systems of writing: simplified Chinese, which is used in mainland China, and traditional Chinese, which is used in Hong Kong and Taiwan.

Most companies that translate their Web sites choose to translate all of their pages. However, as Web sites grow larger, companies are becoming more selective in their translation efforts. Some sites have thousands of pages with much targeted content; the businesses operating those sites can find the cost of translating all pages to be prohibitive.

The decision whether to translate a particular page should be made by the corporate department responsible for each page's content. The home page should have versions in all supported languages, as should all first-level links to the home page. Beyond that, pages that are devoted to marketing, product information, and establishing brand should be given a high translation priority. Some pages, especially those devoted to local interests, might be maintained only in the relevant language. For example, a weekly update on local news and employment opportunities at a company's plant in Frankfurt probably needs to be maintained only in German.

Links to the Web sites of firms that provide Web page translation services and translation software for companies are included in the Additional Resources section of the Web Links under the heading **Language Translation Services**. These firms translate Web pages and maintain them for a fee that is usually between 25 and 90 cents per word for translations done by skilled human translators. Languages that are complex or that are spoken by relatively few people are generally more expensive to translate than other languages.

Different approaches can be appropriate for translating the different types of text that appear on an electronic commerce site. For key marketing messages, the touch of a human translator can be essential to capture subtle meanings. For more routine transaction-processing functions, automated software translation may be an acceptable alternative. Software translation, also called **machine translation**, can reach speeds of 400,000 words per hour, so even if the translation is not perfect, businesses might find it preferable to a human who can translate only about 500 words per hour. Many of the companies in this field are working to develop software and databases of previously translated material that can help human translators work more efficiently and accurately.

The translation services and software manufacturers that work with electronic commerce sites do not generally use the term "translation" to describe what they do. They prefer the term **localization**, which means a translation that considers multiple elements of the local environment, such as business and cultural practices, in addition to local dialect variations in the language. The cultural element is very important because it can affect—and sometimes completely change—the user's interpretation of text.

Cultural Issues

An important element of business trust is anticipating how the other party to a transaction will act in specific circumstances. A company's brand conveys expectations about how the company will behave; therefore, companies with established brands can build online businesses more quickly and easily than a new company without a reputation. For example, a potential buyer might like to know how the seller would react to a claim by the buyer that the seller misrepresented the quality of the goods sold. Part of this knowledge derives from the buyer and seller sharing a common language and common customs. Buyers are more comfortable doing business with sellers they know are trustworthy.

The combination of language and customs is often called **culture**. Most researchers agree that culture varies across national boundaries and, in many cases, varies across regions within nations. For example, the concept of private property is an important cultural value and underlies laws in many European and North American countries. Asian cultures do not value private property in the same way, so laws and business practices in those countries can be quite different. All companies must be aware of the differences in language and customs that make up the culture of any region in which they intend to do business. The Additional Resources section of the Web Links includes links to Web sites that provide detailed information on cultural issues for specific countries under the heading **Global Trust and Culture**.

Managers at Virtual Vineyards (now a part of Wine.com), a company that sells wine and specialty food items on the Web, were perplexed. The company was getting an unusually high number of complaints from customers in Japan about short shipments. Virtual Vineyards sold most of its wine in case (12 bottles) or half-case quantities. Thus, to save on operating costs, it stocked shipping materials only in case, half-case, and two-bottle sizes. After an investigation, the company determined that many of its Japanese customers ordered only one bottle of wine, which was shipped in a two-bottle container. To these Japanese customers, who consider packaging to be an important element of a high-quality product such as wine, it was inconceivable that anyone would ship one bottle of wine in a two-bottle container. They were e-mailing to ask where the other bottle was, notwithstanding the fact that they had ordered only one bottle.

Some errors stemming from subtle language and cultural standards have become classic examples that are regularly cited in international business courses and training sessions. For example, General Motors' choice of name for its Chevrolet Nova automobile

amused people in Latin America—*no va* means "it will not go" in Spanish. Pepsi's "Come Alive" advertising campaign fizzled in China because its message came across as "Pepsi brings your ancestors back from their graves."

Another story that is widely used in international business training sessions is about a company that sold baby food in jars adorned with the picture of a very cute baby. The jars sold well everywhere they had been introduced except in parts of Africa. The mystery was solved when the manufacturer learned that food containers in those parts of Africa always carry a picture of their contents. This story is particularly interesting because it never happened. However, it illustrates a potential cultural issue so dramatically that it continues to appear in marketing textbooks and international business training materials.

Designers of Web sites for international commerce must be very careful when they choose icons to represent common actions. For example, in the United States, a shopping cart is a good symbol to use when building an electronic commerce site. However, many Europeans use shopping *baskets* when they go to a store and may never have seen a shopping *cart*. In Australia, people would recognize a shopping cart image but would be confused by the text "shopping cart" if it were used with the image. Australians call them shopping *trolleys*. In the United States, people often form a hand signal (the index finger touching the thumb to create a circle) that indicates "OK" or "everything is just fine." A Web designer might be tempted to use this hand signal as an icon to indicate that the transaction is completed or the credit card is approved, unaware that in some countries, including Brazil, this hand signal is an obscene gesture.

The cultural overtones of simple design decisions can be dramatic. In India, for example, it is inappropriate to use the image of a cow in a cartoon or other comical setting. Potential customers in Muslim countries can be offended by an image that shows human arms or legs uncovered. Even colors or Web page design elements can be troublesome. For example, white, which denotes purity in Europe and the Americas, is associated with death and mourning in China and many other Asian countries. A Web page that is divided into four segments can be offensive to a Japanese visitor because the number four is a symbol of death in that culture.

Japanese shoppers have resisted the U.S. version of electronic commerce because they generally prefer to pay in cash or by cash transfer instead of by credit card, and they have a high level of apprehension about doing business online. Softbank, a major Japanese firm that invests in Internet companies, devised a way to introduce electronic commerce to a reluctant Japanese population. Softbank created a joint venture with 7-Eleven, Yahoo! Japan, and Tohan (a major Japanese book distributor) to sell books and CDs on the Web. This venture, called eS-Books, allows customers to order items on the Internet, and then pick them up and pay for them in cash at the local 7-Eleven convenience store. By adding an intermediary that satisfies the needs of the Japanese customer, Softbank has been highly successful in bringing business-to-consumer electronic commerce to Japan.

Culture and Government

Some parts of the world have cultural environments that are extremely inhospitable to the type of online discussion that occurs on the Internet. These cultural conditions, in some cases, lead to government controls that can limit electronic commerce development. The Internet is a very open form of communication. This type of unfettered communication is not desired or even considered acceptable in some cultures. For example, a **Human Rights Watch** report stated that many countries in the Middle East and North Africa do not allow their citizens unrestricted access to the Internet. The report notes that many governments in this part of the world regularly prevent free expression by their citizens and have taken specific steps to prevent the exchange of information outside of state

controls. For instance, Saudi Arabia, Yemen, and the United Arab Emirates all filter the Web content that is available in their countries. An organization devoted to the international promotion of democracy and civil liberties, **Freedom House**, offers a number of downloadable publications on its site, including in-depth reports on Internet censorship activities of governments throughout the world.

In many North African and Middle Eastern countries, officials have publicly denounced the Internet as a medium that helps distribute materials that are sexually explicit, anti-Islam, or that cast doubts on the traditional role of women in their societies. In many of these countries, uncontrolled use of Internet technologies is so at odds with existing traditions, cultures, and laws that electronic commerce is unlikely to exist locally at any significant level in the near future. In contrast, other Islamic jurisdictions in that part of the world, including Algeria, Morocco, and the Palestinian Authority, do not limit online access or content.

A number of restrictive governments in the world control Internet access as a way to prevent the formation and growth of internal independent political activist organizations. By limiting access or monitoring all Internet traffic, the planners of rebellions against the government can be thwarted. During the Arab Spring of 2011, young people in Egypt and Tunisia used social media to share information and coordinate protest locations and activities. The Egyptian authorities were so concerned that they made several (unsuccessful) attempts to steal every Facebook password in the country. One of the first acts of the Libyan rebels after they overthrew Muammar Qaddafi was to restore the country's Internet connection, which had been cut at the start of the rebellion. They also sent a text message to millions of Libyan mobile phone users saying, "Long live free Libya," and added $40 worth of calling credit to each individual phone account.

The censorship of Internet content and communications restricts electronic commerce because it prevents certain types of products and services from being sold or advertised. Further, it reduces the interest level of many potential participants in online activities. If large numbers of people in a country are not interested in being online, businesses that use the Internet as an information and product delivery channel will not develop in those countries.

Other countries, such as the People's Republic of China and Singapore, are wrestling with the issues presented by the growth of the Internet as a vehicle for doing business. These countries have a tradition of controlling their citizens' access to information from outside the country, but they want their economies to reap the benefits of electronic commerce. China created a complex set of registration requirements and regulations that govern any business that engages in electronic commerce. These regulations are enforced by the Public Security Bureau, which is a branch of the state police, not an independent administrative agency. For example, companies in China that sell Internet services must register all of their customers with the Public Security Bureau and must retain copies of all e-mail messages and chat room conversations for 60 days. Chinese citizens entering a chat room at **Sohu.com**, one of China's leading portal sites ("sohu" means "search fox" in Chinese), are greeted with a Web page containing the following text (translated here from the original Chinese):

> Warning! Please take note that the following issues are prohibited according to Chinese law: 1) Criticism of the People's Republic of China Constitution. 2) Revealing State secrets, and discussion about overthrowing the Communist government. 3) Topics which damage the reputation of the State.

The Chinese government regularly conducts reviews of ISPs and their records. Every year, the Chinese Public Security Bureau shuts down thousands of Internet cafes for

failing to keep adequate records and requires many others to suspend operations while they implement required electronic record-keeping procedures. Operators of Web sites in China are required to monitor all content that appears on their sites. Blogbus, a Chinese site that allowed visitors to post essays, was shut down in 2004 because one posting (out of 15,000) contained an essay that included what the government deemed to be "forbidden content." Hundreds of people have been jailed in China for posting "subversive" content on Web pages.

More recently, China has required the installation of censoring software on all computers used in schools and Internet cafes. This software, called the Green Dam Youth Escort, blocks any Web sites on a government banned list and tracks details of the use of the computer on which it is installed. A requirement that all computers sold in China have this software installed was withdrawn in 2009; however, other government efforts to limit access to the Internet are in place. For example, China's Golden Shield Project is an $800 million effort to limit its citizens' access to information on the Internet that it deems to be forbidden. The Chinese government actively monitors developments in the world to determine what it will censor. For example, Chinese human rights activist Liu Xiaobo became a forbidden topic when he won the 2010 Nobel Peace Prize.

North Korea, Singapore, and a number of Middle Eastern countries have also adopted rules and policies that restrict their citizens' use of the Internet. These countries will continue to face difficult policy choices as they maintain their attempts to control individuals' use of the Internet while at the same time trying to encourage growth in online business transactions.

Some countries, although they do not ban electronic commerce entirely, have strong cultural requirements that have found their way into the legal codes that govern business conduct. In France, an advertisement for a product or service must be in French. Thus, a business in the United States that advertises its products on the Web and is willing to ship goods to France must provide a French version of its pages if it intends to comply with French law. Many U.S. electronic commerce sites include in their Web pages a list of the countries from which they will accept orders through their Web sites.

Infrastructure Issues

Businesses that successfully meet the challenges posed by trust, language, and culture issues still face the challenges posed by variations and inadequacies in the infrastructure that supports the Internet throughout the world. Internet infrastructure includes the computers and software connected to the Internet and the communications networks over which the message packets travel. In many countries other than the United States, the telecommunications industry is either government-owned or heavily regulated by the government. In many cases, regulations in these countries have inhibited the development of the telecommunications infrastructure or limited the expansion of that infrastructure to a size that cannot reliably support Internet traffic.

Local connection costs through the existing telephone networks in many developing countries are very high compared to U.S. costs for similar access. This can have a profound effect on the behavior of electronic commerce participants. For example, in countries where Internet connection costs are high, few businesspeople would spend time surfing the Web to shop for a product. They would use a Web browser only to navigate to a specific site that they know offers the product they want to buy. Thus, to be successful in selling to businesses in such countries, a company would need to advertise its Web presence in traditional media instead of relying on Web search engines to deliver customers to their Web sites.

More than half of all businesses on the Web turn away international orders because they do not have the processes in place to handle such orders. Some of these companies are losing millions of dollars' worth of international business each year. This problem is global; not only are U.S. businesses having difficulty reaching their international markets, but businesses in other countries are having similar difficulties reaching the U.S. market.

The paperwork and often-convoluted processes that accompany international transactions are targets for technological solutions. Most firms that conduct business internationally rely on a complex array of freight-forwarding companies, customs brokers, international freight carriers, bonded warehouses, and importers to navigate the maze of paperwork that must be completed at every step of the transaction to satisfy government and insurance requirements. A **freight forwarder** is a company that arranges shipping and insurance for international transactions. A **customs broker** is a company that arranges the payment of tariffs and compliance with customs laws for international shipments. A number of companies combine these two functions and offer a full range of export management services. A **bonded warehouse** is a secure location where incoming international shipments can be held until customs requirements are satisfied or until payment arrangements are completed. The multiple flows of information and transfers of physical objects that occur in a typical international trade transaction are illustrated in Figure 1-14.

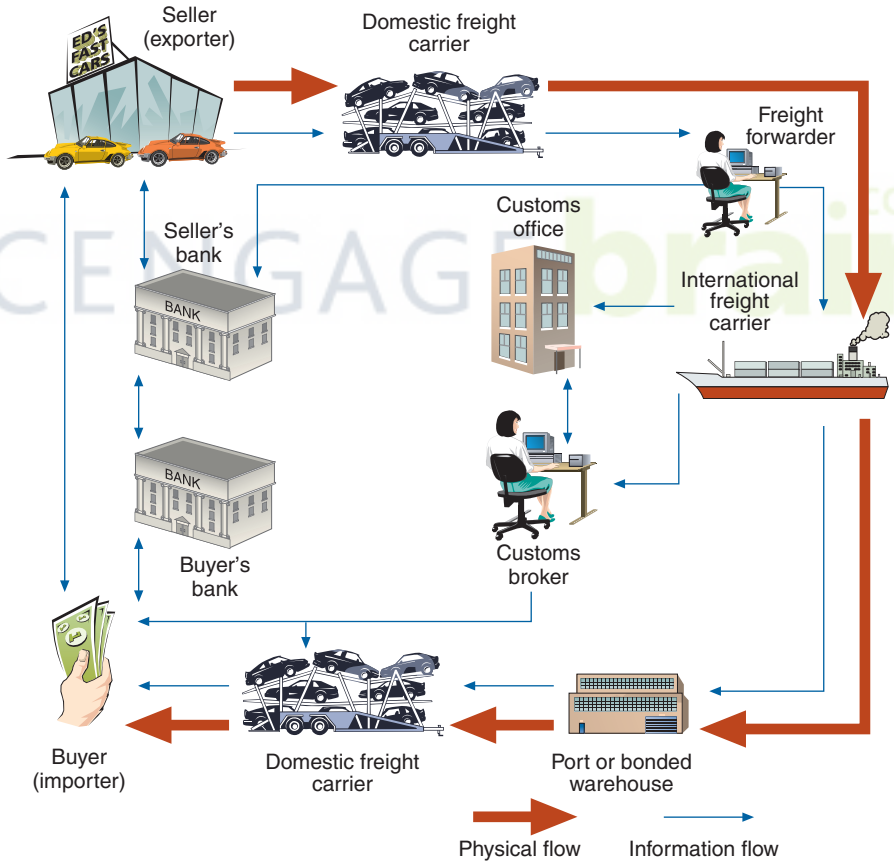


FIGURE 1-14 Parties involved in a typical international trade transaction

As you can see in Figure 1-14, the information flows can be complex. Domestic transactions usually include only the seller, the buyer, their respective banks, and one freight carrier. International transactions almost always require physical handling of goods by several freight carriers, storage in a freight forwarder's facility before international shipment, and storage in a port or bonded warehouse facility in the destination country. This handling and storage require monitoring by government customs offices in addition to the monitoring by seller and buyer that occurs in domestic transactions. International transactions usually require the coordinated efforts of customs brokers and freight forwarding agencies because the regulations and procedures governing international transactions are so complex. You will learn more about how businesses transfer money in international transactions in Chapter 11.

Industry experts estimate that the annual cost of handling paperwork for international transactions is $700 billion. Companies sell software that can automate some of the paperwork; however, many countries have their own paper-based forms and procedures with which international shippers must comply. To further complicate matters, some countries that have automated some procedures use computer systems that are incompatible with those of other countries.

Some governments provide assistance to companies that want to do international business on the Web. The Argentine government operates the **Fundación Invertir** Web site to provide information to companies that want to do business in Argentina. The **U.S. Commercial Service** (an agency of the U.S. Department of Commerce) operates the **BuyUSA** site, a portal for U.S. companies that want to sell abroad and non-U.S. companies that want to buy from U.S. companies.

Infrastructure issues will continue to prevent international business from reaching its full potential until technology is adapted to overcome barriers instead of being a part of those barriers.

Summary

In this chapter, you learned that electronic commerce is the application of new technologies, particularly Internet and Web technologies, to help individuals, businesses, and other organizations conduct business more effectively. Electronic commerce is being adopted in waves of change. The first wave of electronic commerce ended in 2000. The second wave, with new approaches to integrating Internet technologies into business processes, is under way. In the second wave, businesses are focusing less on overall business models and more on improving specific business processes. A third wave of electronic commerce is just now beginning that will capitalize on the availability of mobile devices such as smart phones and tablet computers. These devices, along with increasing use of social media Web sites, will extend the reach of the Internet to new customers and locations, opening new avenues of electronic commerce for companies around the world.

Using electronic commerce, some businesses have been able to create new products and services, and others have improved the promotion, marketing, and delivery of existing offerings. Firms have also found many ways to use electronic commerce to improve purchasing and supply activities; identify new customers; and operate their finance, administration, and human resource management activities more efficiently. You learned that electronic commerce can help businesses reduce transaction costs or create network economic effects that can lead to greater revenue opportunities.

You examined an overview of markets, hierarchies, and networks—the economic structures in which businesses operate—and learned how electronic commerce fits into those structures. Porter's ideas about value chains at the business unit and industry levels were presented, and you learned how to use value chains and SWOT analysis as ways to understand business processes and analyze their suitability for electronic commerce implementation.

The inherently global nature of electronic commerce leads to many opportunities and a few challenges. You learned that companies engaged in international electronic commerce must understand the trust, cultural, language, and legal issues that arise when doing business across national borders.

Key Terms

Activity
Bonded warehouse
Business model
Business processes
Business unit
Business-to-business (B2B)
Business-to-consumer (B2C)
Business-to-government (B2G)
Commodity item
Company
Consumer-to-consumer (C2C)
Culture
Customs broker
Dot-com
E-procurement
Electronic business (e-business)
Electronic commerce (e-commerce)
Electronic data interchange (EDI)
Electronic funds transfer (EFT)
Firm
First-mover advantage
Freight forwarder
Hierarchical business organization
Industry
Industry value chain
Law of diminishing returns
Localization
Machine translation
Market
Merchandising

Mobile commerce (m-commerce)
Network economic structure
Network effect
Primary activities
Procurement
Pure dot-com
Revenue model
Shipping profile
Smart phone
Social commerce
Social networking site
Strategic alliance
Strategic business unit (SBU)
Strategic partners
Strategic partnership
Supply management
Supporting activities
SWOT analysis
Telecommuting
Telework
Trading partners
Transaction
Transaction costs
Value-added network (VAN)
Value chain
Value system
Vertical integration
Virtual community
Virtual company
Web 2.0
Wire transfer

Review Questions

1. Briefly describe the technologies that are leading businesses into the third wave of electronic commerce.
2. Figure 1-5 lists roommate-matching services as a type of business that is well suited to a combination of electronic and traditional commerce. In one paragraph, describe the elements of this service that would be best handled using traditional commerce, and explain why.
3. Briefly describe the specific activities that a motorcycle manufacturer might include in B2B electronic commerce for its supply management or procurement operations.
4. What are the main functions of a value-added network?
5. Many business analysts have discussed the concept of the first-mover advantage. What are some of the disadvantages of being a first mover?
6. What is a shipping profile, and why is it an important consideration for firms making online sales?
7. What are transaction costs, and why are they important?
8. Provide one example of how electronic commerce could help change an industry's economic structure from a hierarchy to a network.
9. Why would a strategic business unit have its own mission and objectives?
10. How might a university use SWOT analysis to identify new degree programs that it could offer online?
11. Briefly describe the function a customs broker might play in the delivery of online that were purchased online.

Exercises

1. Companies that sell luxury goods, such as **Chanel**, **Lilly Pulitzer**, and **Vera Wang**, were reluctant to offer their products for sale on their Web sites for many years. These businesses preferred to use their Web sites to display information about their products only and to sell their products through exclusive retail stores. Summarize the reasons these luxury goods producers might have been hesitant to sell online and speculate why they might have changed their thinking.
2. You have decided to buy a new color printer for your home office. You have not decided whether an ink-jet or laser printer would be best for you. List specific activities that you must undertake as you gather information about printer capabilities and features. Use the **HPshopping.com**, **Office Depot**, **Best Buy**, **OfficeMax**, and **Staples** Web sites to gather information. Write a short summary of the process you undertook to serve as a model for others who plan to undertake a similar task.
3. Choose one of the Web sites listed in the previous question and identify three ways the company has reduced its transaction costs by using a Web site to provide information about printers. List these three transaction cost-reduction elements and write a paragraph in which you discuss one transaction cost-reduction opportunity that you believe the company missed.
4. Create a diagram (similar to the diagram in Figure 1-10) that describes the industry value chain for a stainless steel water bottle. Identify stages of the chain in which a company might use electronic commerce and explain how the company might use it in those stages.
5. Read the following business messages and come up with a list of words or phrases in each message that you believe might be troublesome for automated translation software. Then use either the **Yahoo! Babel Fish** or the **FreeTranslation** Web site to translate the messages from English to one of the foreign languages available on that site. Translate each message back into English. Write a short memo that compares the problems you anticipated with those that occurred in the automated translation. The business messages are the following:
   a. The flight has been delayed for several hours and your shipment of components will not arrive as scheduled.
   b. We would be happy to bid on your proposal; however, we will need the drawings of subassembly #24 and the supervising mechanical engineer's quality control report by next Thursday.
   c. Our company offers the latest and greatest hot deals on wheels. We would love to send you a brochure that explains why our brakes, wheels, and suspension components will do the job for you effectively and economically.

Cases

C1. Amazon.com

In 1994, a 29-year-old financial analyst and fund manager named Jeff Bezos became intrigued by the rapid growth of the Internet. Looking for a way to capitalize on this hot new marketing tool, he made a list of 20 products that might sell well on the Internet. After some intense analysis, he determined that books were at the top of that list. Although Bezos liked the name Abracadabra, he decided to call his online bookshop Amazon.com. Today, **Amazon.com** has more than 100 million customers and sells billions of dollars' worth of all types of merchandise.

When he started, Bezos had no experience in the bookselling business, but he realized that books had an ideal shipping profile for online sales. He believed that many customers would be willing to buy books without inspecting them in person and that books could be impulse purchase items if properly promoted on a Web site. By accepting orders on its Web site, Bezos believed that Amazon.com could reduce transaction costs in the sale to the customer.

Several million book titles are in print at any one time throughout the world, and more than a million of those are in English. However, the largest physical bookstore cannot stock more than 200,000 books and carries even fewer titles because bookstores stock more than one copy of each title. Having a wide selection was important because Bezos believed it would help create a network economic effect. People would visit Amazon.com whenever they wanted to buy a book because it would be the most likely store (physical or online) to have a particular title. After becoming satisfied customers, people would return to Amazon.com to buy more books and would eventually stop looking elsewhere.

The structure of the supply side of the book business was equally important to Amazon.com's success. Music CDs, which were second on Bezos' list, were produced by a few major recording companies who could easily control Amazon.com's supply. In contrast, there were a large number of book publishers, none of which held a dominant position in the book-selling marketplace. Thus, it was unlikely that a single supplier could restrict Bezos' supply of books or enter his market as a competitor. He decided to locate his firm in Seattle, close to a large pool of programming talent and near one of the largest book distribution warehouses in the world. These supply factors were important because Bezos wanted to develop efficiencies that would allow Amazon.com to reduce transaction costs for its purchases as well as its sales transactions.

Bezos encouraged early customers to submit reviews and ratings of books, which he posted with the publisher's information about the book and with reviews written by Amazon.com employees. This customer participation served as a substitute for the corner bookshop staff's friendly advice and recommendations. Bezos saw the power of the Internet in reaching small, highly focused market segments, but he realized that his comprehensive bookstore could not be all things to all people. Therefore, he created a sales associate program in which Web sites devoted to a particular topic, such as model railroading, could provide links to Amazon.com books that related to that topic. In return, Amazon.com remits a percentage of the referred sales to the owner of the referring site.

Although Bezos' original vision was to create an online bookstore with the world's best selection, Amazon has moved into other product lines where opportunities for network economic effects and transaction cost reductions looked promising. In 1998, Amazon.com began selling music CDs and videos, first on VHS tape, and then later on DVD. More recently, Amazon added MP3 music downloads. Today, Amazon offers thousands of products in dozens of categories.

By paying attention to every process involved in buying, promoting, selling, and shipping consumer goods, and by working to improve each process continually, Bezos and Amazon.com became one of the first highly visible success stories in electronic commerce. In fact, Amazon.com now generates significant revenue by supplying other sellers of consumer goods with the technology to sell those goods online. One of its first partnerships was with Toys"R"Us, a company that had experienced difficulties in selling online and making deliveries on time in the 1999 holiday shopping season. Toys"R"Us signed an agreement with Amazon.com in 2000 that placed Toys"R"Us products on the Amazon.com Web site. Amazon.com would accept the orders on its Web site and would ship products to customers for Toys"R"Us in exchange for a percentage of each sale. Amazon.com also agreed not to sell toys itself or on behalf of other partners for whom it might provide online sales services in the future. For example, when

Amazon agreed to sell Target products online, it could not sell Target's toy lines on its Web site. (Target is the third-largest toy retailer in the world, behind Wal-Mart and Toys"R"Us.)

In addition to the online sales services Amazon.com provides to Toys"R"Us, Target, CDNow, and other large companies, it provides similar services to many smaller companies with its Amazon Marketplace offering. In Amazon Marketplace, small retailers become members of an online shopping mall on Amazon's site.

Toys"R"Us sales exceeded $300 million by 2004 on the Amazon.com site. Both Toys"R"Us and Amazon.com benefited from the network economics effect they obtained by having toys available for sale on Amazon.com's well-known electronic commerce site. Many small toy retailers in the Amazon Marketplace program also benefited because shoppers visited the Amazon.com site looking for toys. When a site visitor searched for a toy, the Amazon Marketplace retailers' offerings were presented on the search results page along with results from Toys"R"Us and Amazon.com.

Required:

1. In 2004, Toys"R"Us sued Amazon.com for violating terms of the agreement between the companies; specifically, Toys"R"Us objected to Amazon.com's permitting Amazon Marketplace retailers to sell toys. (*Note*: When the lawsuit was filed, Amazon Marketplace was called "zShops.") Amazon.com responded by filing a countersuit. After more than two years of litigation, a New Jersey Superior Court judge ruled that the agreement had been violated by both parties. The judge ordered that the agreement be terminated and denied both companies' claims for monetary damages. Amazon.com appealed the ruling. In 2009, an appellate court affirmed the lower court ruling but reversed the ruling on damages, which had awarded Toys"R"Us $93 million plus interest. In June 2009, the two companies finally agreed in an out-of-court settlement that Amazon.com would pay damages of $51 million. Use your favorite search engine and the Web Links for Case C1 to review the courts' findings and rulings. Prepare a report of about 200 words in which you summarize each company's arguments and the rationale given by the judges for their decisions. Conclude the report by stating what you believe the outcome of the dispute should have been and why.
2. Outline the advantages and disadvantages that Amazon.com would have considered before it made the agreement with Toys"R"Us to limit competing toy sales. In about 200 words, summarize these advantages and disadvantages, and then evaluate Amazon.com's decision to enter such an agreement.
3. In about 200 words, outline specific recommendations you would have made to Amazon.com in 2004 for negotiating a settlement with Toys"R"Us that would have benefited both companies and avoided litigation.
4. In 2009, Amazon.com purchased **Zappos**, a highly successful shoe retailer that was started in 1999. Many industry observers believe that the design and layout of the Zappos Web site has been an important element in the company's success. Visit the Zappos site and compare its layout and operation to the Amazon.com site. Determine whether Amazon.com should fold Zappos into its Web site or keep it operating in its current form. State and justify your position in the form of a memo of about 300 words to Amazon.com top management.
5. In 1998, Amazon.com purchased the **Internet Movie Database** for a substantial, but undisclosed, sum. The site offers reviews of movies and information about movies, actors, directors, and others involved in the filmmaking business. The site does not charge membership fees (except for a small area of the site reserved for people who work in the film industry, called IMDbPro, which does not generate a substantial amount of revenue for

Amazon.com). In about 100 words, speculate on why Amazon.com might have purchased this Web site and explain how it benefits from owning the site today.

Note: Your instructor might assign you to a group to complete this case and might ask you to prepare a formal presentation of your results to your class.

C2. Hal's Woodworking

Hal Donovan started an ordinary hardware store, named Hal's Hardware in Sandusky, Ohio, in 1978. He had been working during his summer vacations from college for a long-established hardware store and decided he liked the business. Hal's Hardware developed an excellent reputation as a friendly neighborhood store. The store managers are all active in the community and the store regularly sponsors youth sports teams and supports local charities. When hired, salespeople go through a comprehensive training program that includes skill training in the areas of the store in which they will work (plumbing, electrical, power tools, flooring, garden, and so on), and they are trained in customer service skills. As a result of this focus on service, Hal's Hardware became a community gathering place.

Hal offers classes and workshops for the homeowner and hobbyist three evenings each month and regularly schedules seminars for professional customers on weekday mornings. Many of these workshops and seminars are underwritten and taught by manufacturers to promote their products, but an increasing number are being created by Hal's Hardware staff members.

In recent years, Hal has become more and more worried that the business is no longer growing. The store is facing increasing competition from hardware chains such as **Home Depot** and **Lowe's**. These national chains have opened many new stores, and they are larger, carry more items, and offer lower prices on some items. The competition is fierce; for example, Hal's Hardware closed its lumber department because of this competition. The national chains buy lumber in such large quantities that they can offer far lower prices. Hal was unable to earn a profit when matching the large competitors' prices, and the lumber operations consumed a large amount of store space.

Hal was worried that this sort of problem could develop in other departments, so he began looking for ways to add value to the customer experience, especially in ways that the national chains were not willing or able to do. For example, Hal believes that most people want to try out a new power tool in person before they spend hundreds of dollars on a purchase. Thus, Hal's Hardware created a tool demonstration area staffed with salespeople who are experts in power tool operation. For each major type of power tool (drills, power saws, joiners, grinding tools, and so on), Hal created a small booklet of hints for using that type of tool. Hal's salespeople give these booklets to customers as free handouts. They also sell Hal's own low-cost instructional DVDs.

Hal's Hardware currently has a Web site that includes information about the company and some store information, such as directions to the store and hours of operation. Hal is thinking about expanding the Web site to include online shopping. He is hoping that customers might find the Web site to be a useful way to order items, see whether items are in stock at the store, and comparison shop among different brands of a particular item. Hal is also hopeful that the Web site can reach customers who are not located near the store.

Hal has been talking with Sarah Johnson, his most senior store manager, about his idea for adding online sales to the Web site. Sarah has been with the company for 20 years and has organized a number of the classes held on Saturday afternoons in the tool demonstration area. After hearing Hal's ideas, she explains that she is concerned about online competition as much as local competition. Some of the tool manufacturing companies that supply Hal's Hardware are talking about selling directly to customers on their Web sites. None of the major suppliers has

done this yet, but Sarah is worried that it could occur in the future. The store also faces competition from companies that sell online or through the Amazon.com Web site.

Sarah tells Hal that she's concerned that going online with their entire product line might not make any sense because the competition for common tools is likely to be just as fierce online as it is in the store now. She has noticed that there seems to be a solid core of customers who are interested in serious woodworking and who show up for a lot of the classes. These customers buy some of the best, and most expensive, tools that the store sells. Many times, she finds that she has to special order tools for these customers when they are working on a specific project.

Sarah suggests to Hal that they might want to take the business in a different direction online and sell just the high-end specialty tools to dedicated woodworkers and cabinetmakers. These items yield higher margins than the regular tools. Furthermore, the salespeople who Hal has hired are eager to develop videos and instruction booklets that would appeal to this more skilled and specialized audience. Sarah suggests that they call the new online business Hal's Woodworking to distinguish it from the general hardware store business.

Required:

1. Conduct a SWOT analysis for the new Hal's Woodworking online business. You can use the information in the case narrative, your personal knowledge of the retail hardware and tool industry, and information you obtain by following the Web Links or doing independent searches of the Web as you conduct your analysis. You should create a diagram similar to Figure 1-12 to summarize your SWOT analysis results.
2. Based on your SWOT analysis, write a report of about 400 words that includes a summary of your assumptions and a list of recommendations for Hal's Woodworking. The recommendations should be specific and should address the content that the Web site should include, the features that Hal should make available on the site, and how Hal's Woodworking might overcome any of the weaknesses or threats you identified in the SWOT analysis.

Note: Your instructor might assign you to a group to complete this case and might ask you to prepare a formal presentation of your results to your class.

For Further Study and Research

Bannan, K. 2006. "Lost in Translation," *B to B*, June, 91(7), 21–23.

Berthon, P., L. Pitt, D. Cyr, and C. Campbell. 2008. "E-readiness and Trust: Macro and Micro Dualities for E-commerce in a Global Environment," *International Marketing Review*, 25(6), 700–714.

Bodeen, C. 2004. "China Shuts Down Internet Blogs," *Salon.com*, March 19. (http://www.salon.com/news/wire/2004/03/19/blogs2/index.html)

Boles, C. and S. Morrison. 2007. "Yahoo Settles Suit Over Jailed Chinese Dissidents," *The Wall Street Journal*, November 14, A2.

Castells, M. 1996. *The Rise of the Network Society*. Cambridge, MA: Blackwell.

Chen, T. and V. Wang. 2010. "Web Filtering and Censoring," *Computer*, 43(3), March, 94–97.

Coase, R. 1937. "The Nature of the Firm," *Economica*, 4(4), November, 386–405.

Cohn, M. 2001. "China Seeks to Build the Great Firewall," *The Toronto Star*, July 21, A1.

Collett, S. 1999. "SWOT Analysis," *Computerworld*, 33(29), July 19, 58.

Computerworld. 2001. "Autopsy of a Dot Com," January 19. (http://www.computerworld.com/cwi/story/0,1199,NAV47_STO56616,00.html)

Drickhamer, D. 2003. "EDI Is Dead! Long Live EDI!" *Industry Week*, 252(4), April, 31–35.

The Economist. 2011. "Going, Going… The Fall of Muammar Qaddafi Will Transform Libya, the Middle East and NATO," August 27, 11–12.

Einhorn, B. and H. Green. 2005. "Blogs Under Its Thumb; How Beijing Keeps the Blogosphere From Spinning Out of Control," *Business Week*, August 8, 42.

Enright, A. 2011. "Classy Examples: Luxury Brands Show How to Sell High-ticket Items Online," *Internet Retailer*, May 31, 74–80.

Freeman, C. and F. Louçã. 2001. *As Time Goes By*. Oxford: Oxford University Press.

Friedman, M. 1999. "Photographer Fights Quebec Language Law," *Computing Canada*, 25(24), June 18, 1, 4.

Gold, J. 2004. "Amazon Countersues Toys"R"Us," *The Washington Post*, June 29, E5.

Goldstein, E. 1999. *The Internet in the Mideast and North Africa: Free Expression and Censorship*. Washington: Human Rights Watch.

Gosh, S. 1998. "Making Business Sense of the Internet," *Harvard Business Review*, 76(2), March–April, 126–135.

Grau, J. 2011. *U.S. Retail Ecommerce Forecast: Growth Opportunities in a Maturing Channel*. New York: eMarketer.

Hammer, M. and J. Champy. 1993. *Reengineering the Corporation: A Manifesto for Business Revolution*. New York: HarperBusiness.

Harrington, H., E. Esseling, and H. van Nimwegen. 1997. *Business Process Improvement Workbook: Documentation, Analysis, Design, and Management of Business Process Improvement*. New York: McGraw-Hill.

Harsany, J. 2004. "Web Grocer Hits Refresh: Online Grocer FreshDirect Takes the Hassle Out of City Shopping," *PC Magazine*, May 18, 76.

Hill, C., G. Zhang, and G. Scudder. 2009. "An Empirical Investigation of EDI Usage and Performance Improvement in Food Supply Chains," *IEEE Transactions on Engineering Management*, 56(1), February, 61–75.

Hof, R. 2003. "Reprogramming Amazon," *Business Week*, December 22, 82.

Holahan, C. 2007. "Yahoo! Agrees to Pay Prisoners' Families," *BusinessWeek*, November 14. (http://www.businessweek.com/technology/content/nov2007/tc20071113_712283.htm)

Horrigan, J. and L. Rainie. 2002. *Getting Serious Online*. Washington: Pew Internet & American Life Project.

Internet Retailer. 2011. Trends & Data: Mobile Commerce Sales Growth. (http://www.internetretailer.com/trends/sales/)

Jackson, T. 2005. "New Car Buyers Flocking to Internet," *Bankrate.com*, February 15. (http://biz.yahoo.com/brn/050215/14987_1.html)

Kristof, N. 2005. "Death by a Thousand Blogs," *The New York Times*, May 24, A21.

Lapres, D. 2000. "Legal Do's and Don'ts of Web Use in China," *China Business Review*, 27(2), March–April, 26–28.

Levaux, J. 2001. "Adapting Products and Services for Global E-Commerce: The Next Frontier Is Beyond Localization," *World Trade*, 14(1), January, 52–54.

Lewis, S. 2002. "Online Lessons for Asia's SMEs," *Asian Business*, 38(1), January, 41.

Lightman, S. 2007. "Web Globalization," *B to B*, October, 92(13), 11.

Lunce, S., L. Lunce, Y. Kawai, and B. Maniam. 2006 "Success and Failure of Pure-Play Organizations: Webvan Versus Peapod, a Comparative Analysis," *Industrial Management & Data Systems*, 106(9), 1344–1358.

Mackey, C. 2003. "The Evolution of E-business," *Darwin*, May 1. (http://www.darwinmag.com/read/050103/ebiz.html)

MacKinnon, M. 2010. "Jailed Dissident's Nobel Peace Prize Infuriates China," *The Globe and Mail*, October 8. (http://www.theglobeandmail.com/news/world/jailed-dissidents-nobel-peace-prize-infuriates-china/article1750923/)

MacLaggan, C. 2004. "Global Grocer," *Latin Trade*, 12(4), April, 51–54.
Mangalindan, M. 2006. "Court Rules Against Amazon In Toys Dispute," *The Wall Street Journal*, March 3, B1.
Martinez, A. 2009. "Amazon Will Pay Toys"R"U $51 Million to Settle Lawsuit," *Seattle Times*, June 13, B1.
McConnon, A. 2008. "Salad Days For Web Grocers," *BusinessWeek*, September 15, 16.
Mearian, L. 2002. "Insurers Use IT to Fight Brokerage, Bank Rivals," *Computerworld*, 36(16), April 15, 12.
Moon, J., D. Chadee, and S. Tikoo. 2008. "Culture, Product Type, and Price Influences on Consumer Purchase Intention to Buy Personalized Products Online," *Journal of Business Research*, January, 61(1), 31–39.
Murphy, C. 2003. "Five Internet Myths: An Interview with Jeff Bezos," *Information Week*, June 11. (http://www.informationweek.com/story/showArticle.jhtml?articleID=10300770)
Music Business International. 2001. "Losing the Golden Egg-Laying Goose," 11(6), December 1, 11.
Mydans, S. 2007. "Agreeing to Block Some Videos, YouTube Returns to Thailand," *The New York Times*, September 1. (http://www.nytimes.com/2007/09/01/world/asia/01thai.html)
Narayanan, S., A. Marucheck, and R. Handfield. 2009. "Electronic Data Interchange: Research Review and Future Directions," *Decision Sciences*, 40(1), February, 121–163.
Ouchi, M. 2004. "Dual Suits: Amazon.com, Toysrus.com cry 'Foul,'" *The Seattle Times*, July 11, E1.
Ozcan, P. and K. Eisenhardt. 2009. "Origin of Alliance Portfolios: Entrepreneurs, Network Strategies, and Firm Performance," *Academy of Management Journal*, 52(2), 246–279.
Perdue, L. 2001. "A Bright Future: After the Train Wreck," *Inc.*, 23(4), March 15, 51–53.
Petzinger, T. 1999. *The New Pioneers: The Men and Women Who Are Transforming the Workplace and Marketplace*. New York: Simon & Schuster.
PhysOrg.com. 2011. "China E-commerce Sales Up 22% in 2010: Report," January 19. (http://www.physorg.com/news/2011-01-china-e-commerce-sales.html)
Pollock, J. 2011. "Streetbook: How Egyptian and Tunisian Youth Hacked the Arab Spring," *Technology Review*, 114(5), October, 70–82.
Porter, M. 1985. *Competitive Advantage*. New York: Free Press.
Porter, M. 1998. "Clusters and the New Economics of Competition," *Harvard Business Review*, 76(6), November–December, 77–90.
Porter, M. 2001. "Strategy and the Internet," *Harvard Business Review*, 79(3), March, 63–78.
Powell, W. 1990. "Neither Market nor Hierarchy: Network Forms of Organization," *Research in Organizational Behavior*, 12(3), 295–336.
Ramdeen, C., J. Santos, and H. Chatfield. 2009. "EDI and the Internet in the E-Business Era," *International Journal of Hospitality & Tourism Administration*, 10(3), 270–282.
Ramirez, C. 2001. "Disco Virtual Bills Four Times That of Offline Branch," *Business News Americas*, November 8. (http://www.bnamericas.com/story.xsql?id_noticia=78448&Tx_idioma=I&id_sector=1)
Rayport, J. and B. Jaworski. 2001. *E-Commerce*. New York: McGraw-Hill/Irwin.
Ring, R. and A. Van de Ven. 1992. "Structuring Cooperative Relationships Between Organizations," *Strategic Management Journal*, 13(4), 483–498.
Schneider, G. 2005. "Digital Products on the Web: Pricing Issues and Revenue Models," 154–174. In Kehal, H. and V. Singh, eds., *Digital Economy: Impacts, Influences, and Challenges*. Hershey, PA: Idea Group.
Schonfeld, E. 2010. "Forrester Forecast: Online Retail Sales Will Grow to $250 Billion by 2014," *Techcrunch.com*, March 8. (http://techcrunch.com/2010/03/08/forrester-forecast-online-retail-sales-will-grow-to-250-billion-by-2014/)

Shapiro, A. 1999. *The Control Revolution: How the Internet Is Putting Individuals in Charge and Changing the World We Know*. New York: The Century Foundation.

Shapiro, C. and H. Varian. 1999. *Information Rules: A Strategic Guide to the Network Economy*. Boston: Harvard Business School Press.

Shari, M. 2000. "Cutting Red Tape in Singapore," *Business Week*, September 18, 92.

Siwicki, B. 2011. "Stores Link to the Online World," *Internet Retailer*, September, 22–29.

Suarez, F. and G. Lanzolla. 2005. "The Half-Truth of First-Mover Advantage," *Harvard Business Review*, 83(4), April, 121–127.

Tai, Z. 2010. "Casting the Ubiquitous Net of Control: Internet Surveillance in China from Golden Shield to Green Dam," *International Communication Association Annual Meeting*, Suntec City, Singapore.

Tapscott, D. 2001. "Rethinking Strategy in a Networked World: Or Why Michael Porter Is Wrong About the Internet," *strategy + business*, 21(3), 1–8.

Taylor, D. and A. Terhune. 2001. *Doing E-Business: Strategies for Thriving in an Electronic Marketplace*. New York: John Wiley & Sons.

Thynne, J. 2008. "The E-revolution," *Bookseller*, October, 20–21.

U.S. Census Bureau. 2011. *Statistical Abstract of the United States*. Washington: U.S. Census Bureau.

Vascellaro, J. 2009. "Google to Tie Ads to Surfers' Habits," *The Wall Street Journal*, March 12, B8.

Vazdauskas, D. 2006. "To Stay Relevant, Large Brands Must Embrace Localization on Internet," *Advertising Age*, April 10, 77(15), 34.

Wallraff, B. 2000. "What Global Language?" *The Atlantic Monthly*, 286(5), 52–66.

Watts, J. 2005. "Microsoft Helps China to Censor Bloggers," *The Guardian*, June 15, 14.

Williamson, O. 1975. *Markets and Hierarchies: Analysis and Antitrust Implications*. New York: Free Press.

Williamson, O. 1985. *The Economic Institutions of Capitalism*. New York: Free Press.

Yang, K. 2011. "The Aborted Green Dam Youth Escort Censor-ware Project in China," *Telematics and Informatics*, 26(2), May, 101–111.

Yao, Y., M. Dresner, and J. Palmer. 2009. "Private Network EDI vs. Internet Electronic Markets: A Direct Comparison of Fulfillment Performance," *Management Science*, 55(5), 843–852.