After reading this chapter, you will be able to:

- Identify the key components of e-commerce business models.
- Describe the major B2C business models.
- Describe the major B2B business models.
- Recognize business models in other emerging areas of e-commerce.
- Understand key business concepts and strategies applicable to e-commerce.
W hen Webvan.com flamed out in July 2001 after having spent $1 billion trying to build the Web's largest online grocery store based on huge distribution warehouses in seven U.S. cities, most pundits and investors thought the entire online grocery business model was either a failure or a fraud. Facing the costs of building an entirely new distribution system of warehouses and truck fleets to compete with existing grocery businesses, not to mention the expense of marketing, Webvan compounded its problems by offering below-market prices and free delivery of even small orders at just about any time of day or night in urban areas often clogged with traffic. But the pundits did not count on Joe Fedele—co-founder of Manhattan's FreshDirect—or the ability of traditional grocery chains to move into the ashes of the online grocery business to create solid, profitable businesses. According to analysts, the online grocery business reached $1 billion in 2002, and is expected to grow to $5.4 billion by 2007. In 2003, some online grocers are experiencing growth rates of 40% a year. FreshDirect and other traditional firms are learning how to exploit this potential market with profitable business models.

In 2003, traditional firms such as California’s huge Safeway Stores, Royal Ahold (Dutch owner of the U.S. Stop & Shop stores, many other supermarkets, and the Internet startup Peapod.com), and Albertson’s (a West coast chain), are following the lead of the successful British grocer Tesco. Tesco is the largest chain of supermarkets in Britain and opened an online division in 1990. It differed from WebVan’s effort because Tesco used its current warehouse infrastructure and existing stores to put together the baskets of food for consumers. Customers could either pick up their baskets or have them delivered within a chosen time window for a fee that recouped most of the delivery costs. In 2002,
Safeway began offering online ordering and delivery in Portland, Oregon, and then extended service to San Francisco and Sacramento. Customers register online, entering their personal information, including their frequent shopper cards. They are shown lists of recently purchased items to speed selection. The prices of goods are the same as those in the stores. Safeway has so-called “pickers” roam the aisles of nearby stores using a computerized picklist that directs them through the store in an efficient pattern, and even specifies the order of packing goods into bags. The orders are put into a van and delivered to the customer within a 2-hour window for a fee of $10. For these traditional supermarket chains, the value being offered to customers is convenience and time saving at prices only marginally higher than self-shopping.

Joe Fedele—sometimes called the Michael Dell of the grocery business—has a more revolutionary, but apparently successful approach. In 2002, Fedele co-founded FreshDirect as a new kind of high-quality and high-tech food preparation and delivery service in Manhattan. Fedele and his partner—a former investment banker—raised $120 million in venture funding. Operating out of a 300,000 square foot plant in Queens—just across the river from Manhattan—FreshDirect trucks deliver groceries to densely populated Manhattan every night at prices 25% below what most New York grocers charge. It charges a $10 delivery fee. The value proposition to consumers is convenience and time-saving, but also higher quality at lower prices.

How can FreshDirect succeed at these prices? One answer is that FreshDirect concentrates on very fresh perishable foods and stays away from low-margin dry goods. Fedele created the most modern automated perishable food processing plant in the United States. It butchers meat from whole carcasses, makes its own sausage, cuts up its own fish, grinds coffee, bakes bread and pastries and cooks entire prepared meals. These activities proceed at a factory-wide temperature of 36 degrees to ensure freshness. Cleanliness is an obsession: The factory was built to exceed U.S. Department of Agriculture standards. The firm uses SAP software (an enterprise resource planning system) to precisely control production down to the level of telling bakers how many bagels to cook each day and what temperature to use! The final piece in the formula for profit is a new supply chain that includes dealing directly with manufacturers and growers, thus cutting out the costs of middle-level distributors and the huge chains themselves. FreshDirect does not accept slotting fees—payments made by manufacturers for shelf space. Instead, it asks suppliers to help it direct market to consumers and to lower prices. To further encourage lower prices from suppliers, FreshDirect pays them in four business days after delivery—down from the industry pattern of 35 days.

Currently, FreshDirect delivers to only five zip codes in Manhattan, and is adding new ones slowly as it fine-tunes its model. According to Fedele, the company will be profitable in 2003. It plans to build four more plants in the New York metropolitan area before expanding to other East Coast cities. By expanding into institutional sales to schools and hospitals, Fedele believes he can grow revenues to $2 billion in a few years. After reading this chapter, see whether you agree with Fedele’s optimistic forecast.

**Sources:**
The story of FreshDirect.com illustrates the difficulties of turning a good business idea into a good business model. FreshDirect and the other “new” online groceries work as business models because their managers have very carefully thought out the operational details of their ideas, and they have executed these ideas with efficiency and precision.

Thousands of firms in the E-commerce I era discovered they could spend other people’s invested capital much faster than they could get customers to pay for their products or services. In most instances of failure, the business model of the firm was faulty from the very beginning. In contrast, successful e-commerce firms have business models that are able to leverage the unique qualities of the Web, provide customers real value, develop highly effective and efficient operations, avoid legal and social entanglements that can harm the firm, and produce profitable business results. In addition, successful business models must scale: The business must be able to achieve efficiencies as it grows in volume (scale economies). But what is a business model, and how can you tell if a firm’s business model is going to produce a profit?

In this chapter we will focus on business models and basic business concepts that you must be familiar with in order to understand e-commerce.

### 2.1 E-COMMERCE BUSINESS MODELS

#### INTRODUCTION

A **business model** is a set of planned activities (sometimes referred to as **business processes**) designed to result in a profit in a marketplace. The business model is at the center of the business plan. A **business plan** is a document that describes a firm’s business model. An **e-commerce business model** aims to use and leverage the unique qualities of the Internet and the World Wide Web (Timmers, 1998).

#### EIGHT KEY INGREDIENTS OF A BUSINESS MODEL

If you hope to develop a successful business model in any arena, not just e-commerce, you must make sure that the model effectively addresses the eight elements listed in Table 2.1. These elements are: value proposition, revenue model, market opportunity, competitive environment, competitive advantage, market strategy, organizational development, and management team (Ghosh, 1998). Many writers focus on a firm’s value proposition and revenue model. While these may be the most important and most easily identifiable aspects of a company’s business model, the other elements are equally important when evaluating business models and plans, or when attempting to understand why a particular company has succeeded or failed (Kim and...
Mauborgne, 2000). In the following section, we describe each of the key business model elements more fully.

**Value Proposition**

A company’s value proposition is at the very heart of its business model. A value proposition defines how a company’s product or service fulfills the needs of customers (Kambil, Ginsberg, and Bloch, 1998). To develop and/or analyze a value proposition, you need to answer the following key questions: Why will customers choose to do business with your firm instead of another company? What will your firm provide that other firms do not and cannot? From the consumer point of view, successful e-commerce value propositions include: personalization and customization of product offerings, reduction of product search costs, reduction of price discovery costs, and facilitation of transactions by managing product delivery (Kambil, 1997; Bakos, 1998).

FreshDirect, for instance, primarily is offering customers the freshest perishable food in New York, direct from the growers and manufacturers, at the lowest prices, delivered to their homes at night. Although local supermarkets can offer fresh food also, customers need to spend an hour or two shopping at those stores every week. Convenience and time saving are very important elements in FreshDirect’s value proposition to customers.

Before Amazon.com existed, most customers personally traveled to book retailers to place an order. In some cases, the desired book might not be available and the customer would have to wait several days or weeks, and then return to the bookstore to

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**TABLE 2.1**

<table>
<thead>
<tr>
<th>COMPONENTS</th>
<th>KEY QUESTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value proposition</td>
<td>Why should the customer buy from you?</td>
</tr>
<tr>
<td>Revenue model</td>
<td>How will you earn money?</td>
</tr>
<tr>
<td>Market opportunity</td>
<td>What marketspace do you intend to serve, and what is its size?</td>
</tr>
<tr>
<td>Competitive environment</td>
<td>Who else occupies your intended marketspace?</td>
</tr>
<tr>
<td>Competitive advantage</td>
<td>What special advantages does your firm bring to the marketspace?</td>
</tr>
<tr>
<td>Market strategy</td>
<td>How do you plan to promote your products or services to attract your target audience?</td>
</tr>
<tr>
<td>Organizational development</td>
<td>What types of organizational structures within the firm are necessary to carry out the business plan?</td>
</tr>
<tr>
<td>Management team</td>
<td>What kinds of experiences and background are important for the company’s leaders to have?</td>
</tr>
</tbody>
</table>
pick it up. Amazon makes it possible for book lovers to shop for virtually any book in print from the comfort of their home or office, 24 hours a day, and to know immediately whether a book is in stock. Amazon's primary value propositions are unparalleled selection and convenience.

In many cases, companies develop their value proposition based on current market conditions or trends. Consumers' increasing emphasis on fresh perishable foods—as opposed to frozen or canned goods—is a trend FreshDirect's founders took note of, just as Starbucks' founders saw the growing interest in and demand for coffee bars nationwide. Both companies watched the market and then developed their value proposition to meet what they perceived to be consumers' demand for certain products and services.

**Revenue Model**

A firm's **revenue model** describes how the firm will earn revenue, generate profits, and produce a superior return on invested capital. We use the terms *revenue model* and *financial model* interchangeably. The function of business organizations is both to generate profits and to produce returns on invested capital that exceed alternative investments. Profits alone are not sufficient to make a company "successful" (Porter, 1985). In order to be considered successful, a firm must produce returns greater than alternative investments. Firms that fail this test go out of existence.

Retailers, for example, sell a product, such as a personal computer, to a customer who pays for the computer using cash or a credit card. This produces revenue. The merchant typically charges more for the computer than it pays out in operating expenses, producing a profit. But in order to go into business, the computer merchant had to invest capital—either by borrowing or by dipping into personal savings. The profits from the business constitute the return on invested capital, and these returns must be greater than the merchant could obtain elsewhere, say, by investing in real estate or just putting the money into a savings account.

Although there are many different e-commerce revenue models that have been developed, most companies rely on one, or some combination, of the following major revenue models: the advertising model, the subscription model, the transaction fee model, the sales model, and the affiliate model.

In the **advertising revenue model**, a Web site that offers its users content, services, and/or products also provides a forum for advertisements and receives fees from advertisers. Those Web sites that are able to attract the greatest viewership or that have a highly specialized, differentiated viewership and are able to retain user attention ("stickiness") are able to charge higher advertising rates. Yahoo.com, for instance, derives a significant amount of its revenue from selling advertising such as banner ads. This model, originally one of the primary revenue models for the Web, has fallen somewhat into disfavor, although advertising remains a primary source for Web-based revenue.
subscription revenue model
a company offers its users content or services and charges a subscription fee for access to some or all of its offerings.

In the **subscription revenue model**, a Web site that offers its users content or services charges a subscription fee for access to some or all of its offerings. For instance, Consumer Reports Online provides access to its content only to subscribers, who have a choice of paying a $4.95 monthly subscription fee or a $24.00 annual fee. Experience with the subscription revenue model indicates that to successfully overcome the disinclination of users to pay for content on the Web, the content offered must be perceived as a high-value-added, premium offering that is not readily available elsewhere nor easily replicated. Yahoo, for instance, has broadened its business model to include a monthly $9.95 subscription to Yahoo Platinum, which gives viewers access to CNN, NASCAR racing, ABC News, and other video feeds.

transaction fee revenue model
a company receives a fee for enabling or executing a transaction.

In the **transaction fee revenue model**, a company receives a fee for enabling or executing a transaction. For example, eBay.com created an online auction marketplace and receives a small transaction fee from a seller if the seller is successful in selling the item. E-Trade.com, an online stockbroker, receives transaction fees each time it executes a stock transaction on behalf of a customer.

sales revenue model
a company derives revenue by selling goods, information, or services.

In the **sales revenue model**, companies derive revenue by selling goods, information, or services to customers. Companies such as Amazon.com (which sells books, music, and other products), LLBean.com, and Gap.com, all have sales revenue models.
In the **affiliate revenue model**, sites that steer business to an "affiliate" receive a referral fee or percentage of the revenue from any resulting sales. For example, MyPoints.com makes money by connecting companies with potential customers by offering special deals to its members. When they take advantage of an offer and make a purchase, members earn "points" they can redeem for freebies, and MyPoints.com receives a fee. Community feedback sites such as Epinions.com receive much of their revenue from steering potential customers to Web sites where they make a purchase.

Table 2.2 summarizes these major revenue models.

### Market Opportunity

The term **market opportunity** refers to the company’s intended marketspace (i.e., an area of actual or potential commercial value) and the overall potential financial opportunities available to the firm in that marketspace. The market opportunity is usually divided into smaller market niches. The realistic market opportunity is defined by the revenue potential in each of the market niches where you hope to compete.

For instance, let’s assume you are analyzing a software training company that creates software-learning systems for sale to corporations over the Internet. The overall **affiliate revenue model**

* a company steers business to an affiliate and receives a referral fee or percentage of the revenue from any resulting sales

**market opportunity**

* refers to the company’s intended marketspace and the overall potential financial opportunities available to the firm in that marketspace

**marketspace**

* the area of actual or potential commercial value in which a company intends to operate
size of the software training market for all market segments is approximately $70 billion. The overall market can be broken down, however, into two major market segments: instructor-led training products, which comprise about 70% of the market ($49 billion in revenue), and computer-based training, which accounts for 30% ($21 billion). Within each of those major market segments there are further market niches, such as the Fortune 500 computer-based training market, and the small business computer-based training market. Because the firm is a startup firm, it cannot compete effectively in the large business, computer-based training market (about $15 billion). Large brand-name training firms dominate this niche. The startup firm’s real market opportunity is to sell to the thousands of small business firms who spend about $6 billion on computer-based software training and who desperately need a cost-effective training solution. This is the size of the firm’s realistic market opportunity (see Figure 2.1).

**Competitive Environment**

A firm's competitive environment refers to the other companies selling similar products and operating in the same marketspace. It also refers to the presence of substitute products, potential new entrants to the market, as well as the power of customers and suppliers over your business. We discuss the firm’s environment later in the chapter. The competitive environment for a company is influenced by several factors: how many competitors are active, how large their operations are, what the market share of each competitor is, how profitable these firms are, and how they price their products.

Firms typically have both direct and indirect competitors. Direct competitors are those companies that sell products and services that are very similar and into the

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**TABLE 2.2  FIVE PRIMARY REVENUE MODELS**

<table>
<thead>
<tr>
<th>Revenue Model</th>
<th>Examples</th>
<th>Revenue Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertising</td>
<td>Yahoo.com</td>
<td>Fees from advertisers in exchange for advertisements</td>
</tr>
<tr>
<td>Subscription</td>
<td>WSJ.com, Consumerreports.org, Sportsline.com</td>
<td>Fees from subscribers in exchange for access to content or services</td>
</tr>
<tr>
<td>Transaction Fee</td>
<td>eBay.com, E-Trade.com</td>
<td>Fees (commissions) for enabling or executing a transaction</td>
</tr>
<tr>
<td>Sales</td>
<td>Amazon.com, LLBean.com, Gap.com, Sears.com, JCPenny.com</td>
<td>Sales of goods, information, or services</td>
</tr>
<tr>
<td>Affiliate</td>
<td>MyPoints.com</td>
<td>Fees for business referrals</td>
</tr>
</tbody>
</table>

---

competitive environment refers to the other companies operating in the same marketspace selling similar products.
same market segment. For example, Priceline.com and Travelocity.com, both of whom sell discount airline tickets online, are direct competitors because both companies sell identical products—cheap tickets. *Indirect competitors* are companies that may be in different industries but still compete indirectly because their products can substitute for one another. For instance, automobile manufacturers and airline companies operate in different industries, but they still compete indirectly because they offer consumers alternative means of transportation. CNN.com, a news outlet, is an indirect competitor of ESPN.com not because they sell identical products, but because they both compete for consumers' time online.

The existence of a large number of competitors in any one segment may be a sign that the market is saturated and that it may be difficult to become profitable. On the other hand, a lack of competitors could either signal an untapped market niche ripe for the picking or a market that has already been tried without success because there is no money to be made. Analysis of the competitive environment can help you decide which it is.

**Competitive Advantage**

Firms achieve a *competitive advantage* when they can produce a superior product and/or bring the product to market at a lower price than most, or all, of their competitors (Porter, 1985). Firms also compete on scope. Some firms can develop global markets, while other firms can only develop a national or regional market. Firms that can provide superior products at lowest cost on a global basis are truly advantaged.
Firms achieve competitive advantages because they have somehow been able to obtain differential access to the factors of production that are denied to their competitors—at least in the short term (Barney, 1991). Perhaps the firm has been able to obtain very favorable terms from suppliers, shippers, or sources of labor. Or perhaps the firm has more experienced, knowledgeable, and loyal employees than any competitors. Maybe the firm has a patent on a product that others cannot imitate, or access to investment capital through a network of former business colleagues or a brand name and popular image that other firms cannot duplicate. An asymmetry exists whenever one participant in a market has more resources—financial backing, knowledge, information, and/or power—than other participants. Asymmetries lead to some firms having an edge over others, permitting them to come to market with better products, faster than competitors, and sometimes at lower cost.

For instance, when AOL.com announced in early 2003 that it was introducing a music service to its 27 million subscribers based on MusicNet, a consortium of music labels offering a music catalog of 250,000 songs, the company earned instant credibility because of the reputation of its partners and the size of the catalog assets. Similarly, when Geraldine Laybourne left her senior position at Disney to start the online women’s network, Oxygen.com, her company was given better-than-average odds of success simply because of her background and her connections, which included several larger investors who were willing to invest significant capital to start the company.

One rather unique competitive advantage derives from being first mover. A first mover advantage is a competitive market advantage for a firm that results from being the first into a marketplace with a serviceable product or service. If first movers develop a loyal following or a unique interface that is difficult to imitate, they can sustain their first mover advantage for long periods (Arthur, 1996). Amazon.com provides a good example. However, in the history of technology-driven business innovation, most first movers lack the complimentary resources needed to sustain their advantages, and often follower firms reap the largest rewards (Rigdon, 2000; Teece, 1986). Indeed, many of the success stories we discuss in this book are those of companies that were slow followers—businesses that gained knowledge from failure of pioneering firms and entered into the market late.

Some competitive advantages are called “unfair.” An unfair competitive advantage occurs when one firm develops an advantage based on a factor that other firms cannot purchase (Barney, 1991). For instance, a brand name cannot be purchased and is in that sense an “unfair” advantage. As we will discuss in Chapter 7, brands are built upon loyalty, trust, reliability, and quality. Once obtained, they are difficult to copy or imitate, and they permit firms to charge premium prices for their products.

In perfect markets, there are no competitive advantages or asymmetries because all firms have access to all the factors of production (including information and knowledge) equally. However, real markets are imperfect, and asymmetries leading to competitive advantages do exist at least in the short term. Most competitive
advantages are short term, although some—such as the competitive advantage enjoyed by Coca-Cola because of the Coke brand name—can be sustained for very long periods. But not forever: Coke's sweet soft drink is increasingly challenged by fruit, health, and unique flavor drinks.

Companies are said to leverage their competitive assets when they use their competitive advantages to achieve more advantage in surrounding markets. For instance, Amazon.com's move into the online auction arena leveraged the company's huge customer database, offering customers one more way to buy from Amazon and giving them new access to just about any item someone else had to sell. Amazon also offered small merchants an online store called Amazon Z-shops. Amazon's competitive advantages included the years of e-commerce experience the company had already amassed by the time it ventured into online auctions, plus its database of millions of customers. Amazon has been able to leverage its e-commerce infrastructure into surrounding markets.

**Market Strategy**

No matter how tremendous a firm's qualities, its marketing strategy and execution are often just as important. The best business concept, or idea, will fail if it is not properly marketed to potential customers.

Everything you do to promote your company's products and services to potential customers is known as marketing. **Market strategy** is the plan you put together that details exactly how you intend to enter a new market and attract new customers.

Part of FreshDirect's strategy, for instance, was to develop close supply chain partnerships with growers and manufacturers so it purchases goods at lower prices directly from the source. This helps FreshDirect lower its prices for consumers. By partnering with suppliers that could benefit from FreshDirect's access to consumers, FreshDirect is attempting to extend its competitive advantages.

Other companies, such as Yahoo.com, have used a different marketing strategy. They invest heavily in advertising to get the word out about their site. Simply introducing someone to a new site can be all that is needed to encourage them to use it. AOL, in contrast, uses sampling of millions of free CD ROMs to attract new users. AOL encloses CDs with free trial offers in magazines and newspapers across the country. By distributing a huge volume of samples, AOL hoped that at least a small percentage would opt to try the software and decide to become new subscribers. This strategy has proven to be very successful for AOL, and today they have over 30 million subscribers worldwide.

**Organizational Development**

Although many entrepreneurial ventures are started by one visionary individual, it is rare that one person alone can grow an idea into a multi-million dollar company. In
most cases, fast-growth companies—especially e-commerce businesses—need employees and a set of business procedures. In short, all firms—new ones in particular—need an organization to efficiently implement their business plans and strategies. Many e-commerce firms and many traditional firms who attempt an e-commerce strategy have failed because they lacked the organizational structures and supportive cultural values required to support new forms of commerce (Kanter, 2001).

Companies that hope to grow and thrive need to have a plan for organizational development that describes how the company will organize the work that needs to be accomplished. Typically, work is divided into functional departments, such as production, shipping, marketing, customer support, and finance. Jobs within these functional areas are defined, and then recruitment begins for specific job titles and responsibilities. Typically, in the beginning, generalists who can perform multiple tasks are hired. As the company grows, recruiting becomes more specialized. For instance, at the outset, a business may have one marketing manager. But after two or three years of steady growth, that one marketing position may be broken down into seven separate jobs done by seven individuals.

For instance, eBay.com founder Pierre Omidyar started an online auction site to help his girlfriend trade Pez dispensers with other collectors, but within a few months the volume of business had far exceeded what he alone could handle. So he began hiring people with more business experience to help out. Soon the company had many employees, departments, and managers who were responsible for overseeing the various aspects of the organization.

Management Team

Arguably, the single most important element of a business model is the management team responsible for making the model work. A strong management team gives a model instant credibility to outside investors, immediate market-specific knowledge, and experience in implementing business plans. A strong management team may not be able to salvage a weak business model, but they should be able to change the model and redefine the business as it becomes necessary.

Eventually, most companies get to the point of having several senior executives or managers. How skilled managers are, however, can be a source of competitive advantage or disadvantage. The challenge is to find people who have both the experience and the ability to apply that experience to new situations.

To be able to identify good managers for a business startup, first consider the kinds of experiences that would be helpful to a manager joining your company. What kind of technical background is desirable? What kind of supervisory experience is necessary? How many years in a particular function should be required? What job functions should be fulfilled first: marketing, production, finance, or operations? Especially in situations where financing will be needed to get a company off the
CATEGORIZING E-COMMERCE BUSINESS MODELS: SOME DIFFICULTIES

There are many e-commerce business models, and more are being invented every day. The number of such models is limited only by the human imagination, and our list of different business models is certainly not exhaustive. However, despite the abundance of potential models, it is possible to identify the major generic types (and subtle variations) of business models that have been developed for the e-commerce arena and describe their key features. It is important to realize, however, that there is no one correct way to categorize these business models.

Our approach is to categorize business models according to the different e-commerce sectors—B2C, B2B, C2C, etc.—in which they are utilized. You will note, however, that fundamentally similar business models may appear in more than one sector. For example, the business models of online retailers (often called e-tailers) and e-distributors are quite similar. However, they are distinguished by the market focus of the sector in which they are used. In the case of e-tailers in the B2C sector, the business model focuses on sales to the individual consumer, while in the case of the e-distributor, the business model focuses on sales to another business.

The type of e-commerce technology involved can also affect the classification of a business model. M-commerce, for instance, refers to e-commerce conducted over wireless networks. The e-tail business model, for instance, can also be used in m-commerce, and while the basic business model may remain fundamentally the same as that used in the B2C sector, it will nonetheless have to be adapted to the special challenges posed by the m-commerce environment.

Finally, you will also note that some companies use multiple business models. For instance, eBay.com can be considered as a B2C market maker. At the same time, eBay can also be considered as having a C2C business model. If eBay adopts wireless mobile computing, allowing customers to bid on auctions from their telephones or wireless Web appliances, then eBay may also be described as having a B2C m-commerce business model. We can expect many companies will have closely related B2C, B2B, and m-commerce variations on their basic business model. The purpose will be to leverage investments and assets developed with one business model into a new business model.

2.2 MAJOR BUSINESS-TO-CONSUMER (B2C) BUSINESS MODELS

Business-to-consumer (B2C) e-commerce, in which online businesses seek to reach individual consumers, is the most well-known and familiar type of e-commerce. Table 2.3 illustrates the major business models utilized in the B2C arena.
### TABLE 2.3 B2C BUSINESS MODELS

<table>
<thead>
<tr>
<th>BUSINESS MODEL</th>
<th>VARIATIONS</th>
<th>EXAMPLES</th>
<th>DESCRIPTION</th>
<th>REVENUE MODEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portal</td>
<td>Horizontal/General</td>
<td>Yahoo.com, AOL.com, MSN.com</td>
<td>Offers an integrated package of content services and content-search, news, e-mail, chat, music downloads, video streaming, calendars, etc. Seeks to be a user’s home base.</td>
<td>Advertising, subscription fees, transaction fees</td>
</tr>
<tr>
<td></td>
<td>Vertical/Specialized (Vortal)</td>
<td>Sailnet.com</td>
<td>Offers services and products to specialized marketspace</td>
<td>Same</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Amazon.com</td>
<td>Online version of retail store, where customers can shop at any hour of the day or night without leaving their home or office.</td>
<td>Sales of goods</td>
</tr>
<tr>
<td>E-tailer</td>
<td>Virtual Merchant</td>
<td>Wal-Mart.com, Sears.com</td>
<td>Online distribution channel for a company that also has physical stores</td>
<td>Same</td>
</tr>
<tr>
<td></td>
<td>Catalog Merchant</td>
<td>LandsEnd.com, LLBean.com</td>
<td>Online version of direct mail catalog</td>
<td>Same</td>
</tr>
<tr>
<td></td>
<td>Manufacturer direct</td>
<td>Dell.com, Compaq.com</td>
<td>Information and entertainment providers like newspapers, sports sites, and other online sources that offer customers up-to-date news and special interest how-to guidance and tips and/or information sales.</td>
<td>Sales of goods</td>
</tr>
<tr>
<td></td>
<td>Content Provider</td>
<td>WSJ.com, Sportsline.com, CNN.com, Rhapsody.com, ESPN.com</td>
<td>Processors of online sales transactions, such as stock brokers and travel agents, that increase customers’ productivity by helping them get things done faster and more cheaply.</td>
<td>Transaction fees</td>
</tr>
<tr>
<td></td>
<td>Transaction Broker</td>
<td>E-Trade.com, Expedia.com, Monster.com, Travelocity.com, Hotels.com, Orbitz.com</td>
<td>Processors of online sales transactions, such as stock brokers and travel agents, that increase customers’ productivity by helping them get things done faster and more cheaply.</td>
<td>Transaction fees</td>
</tr>
<tr>
<td></td>
<td>Market Creator</td>
<td>Ebay.com, Priceline.com, Amazon.com</td>
<td>Web-based businesses that use Internet technology to create markets that bring buyers and sellers together</td>
<td>Transaction fees</td>
</tr>
<tr>
<td></td>
<td>Service Provider</td>
<td>Mybcconsulting.com, Lawinfo.com, xDrive, myCFO.com</td>
<td>Companies that make money by selling users a service, rather than a product.</td>
<td>Sales of services</td>
</tr>
<tr>
<td></td>
<td>Community Provider</td>
<td>About.com, IVillage.com, NetNoir.com, Oxygen.com, Epinions.com</td>
<td>Sites where individuals with particular interests, hobbies, and common experiences can come together and compare notes.</td>
<td>Advertising, subscription, affiliate referral fees</td>
</tr>
</tbody>
</table>
PORTAL

Portals such as Yahoo.com, MSN.com, and AOL.com offer users powerful Web search tools (see Insight on Technology: Google.com at the end of Section 2.2) as well as an integrated package of content and services, such as news, e-mail, instant messaging, calendars, shopping, music downloads, video streaming, and more, all in one place. Initially, portals sought to be viewed as “gateways” to the Internet. Today, however, the portal business model is to be a destination site. They are marketed as places where consumers will want to start their Web searching and hopefully stay a long time to read news, find entertainment, and meet other people (think of destination resorts). Portals do not sell anything directly—or so it seems—and in that sense they can present themselves as unbiased. The market opportunity is very large: In 2003, about 150–160 million people in the United States have access to the Internet at work or home (Nielsen/Net Ratings, 2003). Portals generate revenue primarily by charging advertisers for ad placement, collecting referral fees for steering customers to other sites, and charging for premium services. AOL and MSN—which in addition to being portals are also Internet Service Providers (ISPs) that provide access to the Internet and the Web—add an additional revenue stream: monthly subscription fees of around $22–$24 per month for Web access.

Although there are numerous portal/search engine sites, the top five sites gather more than 75% of the search engine traffic because of their superior brand recognition (www.searchenginewatch.com, 2003). Many of the top sites were among the first to appear on the Web and therefore had first mover advantages. Being first confers advantage because customers come to trust a reliable provider and experience switching costs if they change to late arrivals in the market. By garnering a large chunk of the marketplace, first movers—just like a single telephone network—can offer customers access to commonly shared ideas, standards, and experiences (something called network externalities that we describe in later chapters).

Yahoo, AOL, MSN, and others like them are considered to be horizontal portals because they define their marketspace to include all users of the Internet. Vertical portals (sometimes called vortals) attempt to provide similar services as horizontal portals, but are focused around a particular subject matter or market segment. For instance, Sailnet.com specializes in the consumer sailboat market that contains about 8 million Americans who own or rent sailboats. Although the total number of vortal users may be much lower than the number of portal users, if the market segment is attractive enough, advertisers are willing to pay a premium in order to reach a targeted audience. Also, visitors to specialized niche vortals spend more money than the average Yahoo visitor.

E-TAILER

Online retail stores, often called e-tailers, come in all sizes and shapes, from giant Amazon.com to tiny local stores that have Web sites. E-tailers are similar to the typical online retail store...
brick-and-mortar storefront, except that customers only have to connect to the Internet to check their inventory and place an order. Some e-tailers, which are referred to as “clicks and mortar” or “clicks and bricks,” are subsidiaries of existing physical stores and carry the same products. JCPenney, Barnes & Noble, Wal-Mart, and Staples are four examples of companies with complementary online stores. Others, however, operate only in the virtual world, without any ties to physical locations. Amazon.com, iBaby.com, and MarthaStewart.com are examples of this type of e-tailer. Several other variations of e-tailers—such as online versions of direct mail catalogs, online malls, and manufacturer-direct online sales—also exist (Gulati and Garino, 2000).

Given that the overall retail market in the United States in 2003 is estimated to be about $3.2 trillion, the market opportunity for e-tailers is very large (U.S. Census Bureau, 2003). Every Internet user is a potential customer. Customers who feel time-starved are even better prospects, since they want shopping solutions that will eliminate the need to drive to the mall or store (Bellman, Lohse, and Johnson, 1999). The e-tail revenue model is product-based, with customers paying for the purchase of a particular item.

This sector is extremely competitive, however. Since barriers to entry (the total cost of entering a new marketplace) into the Web e-tail market are low, tens of thousands of small e-tail shops have sprung up on the Web. Becoming profitable and surviving is very difficult for e-tailers with no prior brand name or experience. Since 2000, hundreds, if not thousands, of e-tailers have failed and closed shop. The e-tailer’s challenge is differentiating its business from existing stores. How is a new toy e-tailer going to perform better than or differently from ToysRUs.com, the largest online toy e-tailer, which has an alliance with Amazon?

Companies that try to reach every online consumer are likely to deplete their resources quickly. Those that develop a niche strategy, clearly identifying their target market and its needs, are best prepared to make a profit. Keeping expenses low, selection broad, and inventory controlled are keys to success in e-tailing, with inventory being the most difficult to gauge.

**CONTENT PROVIDER**

Although there are many different ways the Internet can be useful, “information content,” which can be defined broadly to include all forms of intellectual property, is one of the largest types of Internet usage. Intellectual property refers to all forms of human expression that can be put into a tangible medium such as text, CDs, or the Web (Fisher, 1992). Content providers distribute information content, such as digital news, music, photos, videos, and artwork over the Web. Retrieving and paying for content is the second largest revenue source for B2C e-commerce, accounting for 14.9% of online sales in 2002 (Johnson, 2002). More Internet users go on the Web to retrieve information than to purchase products (80% versus 53%) (Horrigan and Rainie, 2002).
Content providers make money by charging a subscription fee. For instance, in the case of Rhapsody.com, a monthly subscription fee provides users with access to thousands of song tracks. Other content providers, such as WSJ.com (the Wall Street Journal’s online newspaper), Harvard Business Review, and many others, charge customers for content downloads in addition to or in place of a subscription fee. Micropayment systems technology, such as the Qpass system, provides content providers with a cost-effective method for processing high volumes of very small monetary transactions (anywhere from $.25 to $5.00 per transaction). Micropayment systems have greatly enhanced the revenue model prospects of content providers who wish to charge by the download. Content providers such as CCN.com also make money by selling advertising space on their sites.

Of course, not all online content providers charge for their information; just look at Sportsline.com, CIO.com, CNN.com, and the online versions of many newspapers and magazines. Users can access news and information at these sites without paying a cent. These popular sites make money in other ways, such as through advertising and partner promotions on the site. Increasingly, however, “free content” is limited to headlines and text, whereas premium content—in-depth articles or video delivery—is sold for a fee.

The key to becoming a successful content provider is owning the content. Traditional owners of copyrighted content—publishers of books and newspapers, broadcasters of radio and television content, music publishers, and movie studios—have powerful advantages over newcomers to the Web. Some content providers, however, do not own content, but syndicate (aggregate) and then distribute content produced by others. Syndication is a major variation of the standard content provider model.

Any e-commerce startup that intends to make money by providing content is likely to face difficulties unless it has a unique information source that others cannot access. For the most part, this business category is dominated by traditional content providers.

TRANSACTION BROKER

Sites that process transactions for consumers normally handled in person, by phone, or by mail are transaction brokers. The largest industries using this model are financial services, travel services, and job placement services. Online stockbrokers such as E-Trade.com, Ameritrade.com, and Schwab.com, for instance, have captured about 20% of retail stock transactions. The online transaction broker’s primary value propositions are savings of money and time. In addition, most transaction brokers provide timely information and opinion. Sites such as Monster.com offer job searchers a national marketplace for their talents and employers a national resource for that talent. Both employers and job seekers are attracted by the convenience and currency of information. Online stock brokers charge commissions that are considerably less than traditional brokers, with many offering substantial deals, such as cash and a certain number of free trades, to lure new customers (Bakos, Lucas, et al., 2000).
Given rising consumer interest in financial planning and the stock market, the market opportunity for online transaction brokers appears to be large. However, while millions of customers have shifted to online brokers, many have been wary about switching from their traditional broker who provides personal advice and a brand name. Fears of privacy invasion and the loss of control over personal financial information also contribute to market resistance. Consequently, the challenge for online brokers is to overcome consumer fears by emphasizing the security and privacy measures in place, and, like physical banks and brokerage firms, providing a broad range of financial services and not just stock trading. This industry is covered in greater depth in Chapter 11.

Transaction brokers make money each time a transaction occurs. Each stock trade, for example, nets the company a fee, based either on a flat rate or a sliding scale related to the size of the transaction. Attracting new customers and encouraging them to trade frequently are the keys to generating more revenue for these companies. Job sites generate listing fees from employers up front, rather than charging a fee when a position is filled.

Competition among brokers has become more fierce in the past few years, due to new entrants offering ever more appealing offers to consumers to sign on. Those who prospered initially were the first movers such as E-Trade.com, Ameritrade.com, Datek.com, and Schwab.com. During the E-commerce I era, many of these firms engaged in expensive marketing campaigns and were willing to pay up to $400 to acquire a single customer. However, online brokerages are now in direct competition with traditional brokerage firms who have joined the online marketspace. Significant consolidation is occurring in this industry. The number of job sites has also multiplied, but the largest sites (those with the largest number of job listings) are pulling ahead of smaller niche companies. In both industries, only a few, very large firms are likely to survive in the long term.

**MARKET CREATOR**

Market creators build a digital environment in which buyers and sellers can meet, display products, search for products, and establish a price for products. Prior to the Internet and the Web, market creators relied on physical places to establish a market. Beginning with the medieval marketplace and extending to today's New York Stock Exchange, a market has meant a physical space for transacting. There were few private digital network marketplaces prior to the Web. The Web changed this by making it possible to separate markets from physical space. A prime example is Priceline.com, which allows consumers to set the price they are willing to pay for various travel accommodations and other products (sometimes referred to as a reverse auction) and eBay.com, the online auction site utilized by both businesses and consumers.

For example, eBay's auction business model is to create a digital electronic environment for buyers and sellers to meet, agree on a price, and transact. This is differ-
ent from transaction brokers who actually carry out the transaction for their customers, acting as agents in larger markets. At eBay, the buyers and sellers are their own agents. Each sale on eBay nets the company a fee, in addition to a listing fee upfront. eBay is one of the few Web sites that has been profitable virtually from the beginning. Why? One answer is that eBay has no inventory or production costs. It is simply a middleman.

The market opportunity for market creators is potentially vast, but only if the firm has the financial resources and marketing plan to attract sufficient sellers and buyers to the marketplace. In 2002, eBay had nearly 28 million active users, and this makes for an efficient market: There are many sellers and buyers for each type of product, sometimes for the same product, for example, laptop computer models. New firms wishing to create a market require an aggressive branding and awareness program to attract a sufficient critical mass of customers. Some very large Web-based firms such as Amazon.com have leveraged their large customer base and started auctions. Many other digital auctions have sprung up in smaller, more specialized vertical market segments such as jewelry and automobiles.

In addition to marketing and branding, a company’s management team and organization can make a difference in creating new markets, especially if some managers have had experience in similar businesses. Speed is often the key in such situations. The ability to become operational quickly can make the difference between success and failure.

**SERVICE PROVIDER**

While e-tailers sell products online, **service providers** offer services online. Some charge a fee, while others generate revenue from other sources, such as through advertising and by collecting personal information that is useful in direct marketing. Obviously, some services cannot be provided online; plumbing and car repair, for example, cannot be completed via the Internet. Arrangements can be made, however, for car repair or plumbing via the Internet. Many service providers offer computer services, such as information storage at xDrive.com; provide consulting services, such as at Mybconsulting.com, where small businesses can obtain business advice; or offer advice and services to high-net worth individuals, such as myCFO.com. The most obvious and successful service providers on the Web are the search engines like Google, Yahoo, Overture, Alta Vista, and Lycos. Grocery shopping sites such as FreshDirect and Peapod are also providing services. To complicate matters a bit, most financial transaction brokers (described above) provide services such as college tuition and pension planning. Travel brokers also provide vacation-planning services.

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1 FreshDirect and other e-commerce businesses can also be classified as online retailers insofar as they warehouse commonly purchased items and make a profit based on the spread between their buy and sell prices.
The Web’s hottest search engine isn’t Yahoo or AOL, it’s Google. Although the name sounds a bit juvenile, it’s actually based on complex mathematics—*google* is the common pronunciation of googol, or $10^{100}$. Google was started in 1998 by two enterprising Stanford grad students, Sergey Brin and Larry Page, who were studying data mining and the process of analyzing data for patterns. That research later became the basis of their business, Google, which can search millions of Web pages in less than a second.

What makes Google notable is its proprietary technology. Some search engines merely count how many times a search term appears on a given Web page to determine where to rank a particular page. Clever marketers can exploit the system and jury-rig a page so that it will receive a higher ranking, leaving the user with lists of pages that may not be truly relevant to their search. Google’s engine, on the other hand, uses outside criteria to validate that a search result is likely to be relevant: The more other Web pages that link to a particular page, the higher it jumps in Google’s ranking structure. This is called “link analysis.” Google also factors in other information, such as link structure, fonts, heading, and text of nearby pages. The company uses sophisticated software algorithms to carry out each search, drawing on the power of over 54,000 computers with over 100,000 processors and 261,000 disk drives. Some people believe Google has the largest computing system in the world.

In addition to a higher probability of returning relevant results, other Google technology hallmarks include quick search times, and ease of use. In 2003, over 130 other businesses licensed Google’s search engine; Google itself handles 150 million search requests each day.

However, if there’s one thing that’s become clear in the E-commerce II era, it’s that a “cool” technology does not a successful business model make. Google is known for its sparse, advertising-free opening page (see below). Google has turned Web-page minimalism into an easily recognized brand look. Early on, Brin and Page decided to focus Google purely on the search engine business, in contrast to Yahoo, MSN, and AOL, whose opening pages are filled with advertising. Google promised customers Web searches that were untainted by commercialism. Instead of advertising revenue, Google made money by selling its search engine services to corporations and other Web sites. Indeed, Yahoo, AOL, and AskJeeves all were using Google as their underlying search engine in 2002.

But Google’s attitude toward advertising meant that it almost missed a major market shift in the way companies advertise on the Web and the way consumers want to search the Web. In 1999, a tiny entrepreneurial firm called GoTo.com started to offer paid listings on its search engine and openly invited businesses to bid against one another for their rank in the GoTo search engine listings. By 2002, GoTo had blossomed into a firm named Overture.com, with $442 million annual revenue.
Major Business-to-consumer (B2C) Business Models

revenues, and was providing its paid search engine service to Yahoo, AltaVista, Lycos, HotBot, and others. Google, in contrast had revenues estimated at $300 million in 2002. In pay-for-placement search engines, firms bid against one another for their rank in the listings, but they do not pay until a user actually clicks on the link and goes to the site. This is called “pay for click” advertising. Overture discovered that business firms do not want to be at the mercy of search engine technology and software engineers when it comes to advertising, and that consumers are very interested in listening to companies that are willing to pay for their top listings when the advertising is in direct response to a consumer query. Overture had invented an entirely new form of targeted advertising that caught consumers just at the moment they were looking for an item.

In 2000, Google responded to GoTo.com by introducing tiny paid advertising boxes on the right of its Results pages and selling them for a fixed fee. In February 2002, it began to allow firms to bid for placement and added a sponsored link (a search result listing on the very top of the page for the top two bidders). The remainder of the Google results pages still contain listings generated by the older technology that is not biased by advertisers. By February 2003, Google had developed a new mixed or hybrid business model that combined unbiased listings with pay-for-placement listings. Analysts believe Google has a 30% profit margin, which by any measure is extremely high. How long this will continue depends on competitors and Google's ability to stay on top. Google currently is the top search engine on the Web, but its deal with Yahoo (the most popular portal) ended when Yahoo acquired the Inktomi search engine in 2003. In turn, Overture purchased the AltaVista search engine in 2003 and in July 2003, itself agreed to be acquired by Yahoo. It is unclear at this time if Google will remain in the number one spot.

not just transactions with airlines and hotels. Indeed, mixing services with your products is a powerful business strategy pursued by many hard-goods companies.

The basic value proposition of service providers is that they offer consumers valuable, convenient, time-saving, and low-cost alternatives to traditional service providers or—in the case of search engines—they provide services that are truly unique to the Web. Research has found, for instance, that a major factor in predicting online buying behavior is time starvation. Time-starved people tend to be busy professionals who work long hours and simply do not have the time to pick up packages or buy groceries (Bellman, Lohse, and Johnson, 1999). Service providers make money through subscription fees (if there is a recurring need for the service), one-time payments for a single use of the service, or commissions on items purchased or delivered. When a new subscriber signs on for monthly information storage, xDrive.com makes money. Much like retailers, who trade products for cash, service providers trade knowledge, expertise, and effort for revenue.

The market opportunity for service providers is as large as the variety of services that can be provided and potentially is equal to the market opportunity for physical goods. We live in a service-based economy and society; witness the growth of fast food restaurants, package delivery services, and wireless cellular phone services. Consumers’ increasing demand for convenience products and services bodes well for current and future service providers.

Marketing of service providers must allay consumer fears about hiring a vendor online, as well as build confidence and familiarity among current and potential customers. Name recognition in order to build comfort is the first challenge, with the second challenge being enticing consumers to try the service.

**COMMUNITY PROVIDER**

Although community providers are not a new entity, the Internet made such sites for like-minded individuals to meet and converse much easier, without the limitations of geography to hinder participation. **Community providers** are sites that create a digital online environment where people with similar interests can transact (buy and sell goods), communicate with like-minded people, receive interest-related information, and even play out fantasies by adopting online personalities (Armstrong and Hagel, 1996). The basic value proposition of community providers is to create a fast, convenient, one-stop site where users can focus on their most important concerns and interests. Community providers typically rely on a hybrid revenue model that includes subscription fees, sales revenues, transaction fees, affiliate fees, and advertising fees from other firms that are attracted by a tightly focused audience.

Community sites such as Epinions.com, Oxygen.com, and About.com make money through affiliate relationships with retailers and from advertising. For instance,
a parent might visit Babystyle.com for tips on diapering a baby and be presented with a link to Huggies.com; if the parent clicks the link and then makes a purchase from Huggies.com, Babystyle.com gets a commission. Likewise, banner ads also generate revenue. At About.com, visitors can share tips and buy recommended books from Amazon.com, giving About.com a commission on every purchase. Some of the oldest communities on the Web are Well.com, which provides a forum for technology and Internet-related discussions, and The MotleyFool (Fool.com), which provides financial advice, news, and opinions.

Consumers’ interest in communities seems to be increasing, with the market opportunity expanding as well. The key in developing a new community is to carve out a well-defined niche that is currently not being served. Targeting large market segments will only pit a company against bigger, better established competitors. Small pockets—subsegments of larger markets—have the potential for future growth without as much competitive pressure. The greatest challenge faced by community sites is balancing the cost of high-quality content with the revenue derived from advertising. Currently, community sites are finding it difficult to make a profit, and considerable consolidation in community sites will occur.

Firm qualities that are important among community providers are breadth and depth of knowledge. Since the purpose of communities is to link consumers with similar interests and personal situations, having managers who can relate to such experiences is crucial. Community members frequently request guidance and advice. Lack of experienced personnel can severely hamper the growth of a community, which needs facilitators and managers to keep discussions on course and relevant.

Enticing new participants to join a community is the focus of most marketing strategies, with larger communities generating powerful word-of-mouth advertising and rising commissions. The more community members, the higher the advertising rates that can be charged and the better the chances for sales at partner sites.

2.3 MAJOR BUSINESS-TO-BUSINESS (B2B) BUSINESS MODELS

In Chapter 1, we noted that business-to-business (B2B) e-commerce, in which businesses sell to other businesses, is more than ten times the size of B2C e-commerce, even though most of the public attention has focused on B2C. For instance, total revenues for all types of B2C e-commerce in 2002 were estimated to be about $72–$78 billion (Johnson, 2002; eMarketer.com, 2002), compared to an estimated $800 billion for all types of B2B commerce in 2002 (eMarketer, 2003). Experts predict that B2B purchasing will grow to $5.4 trillion by 2006, or about one-third of total inter-firm purchasing at that
time. Clearly, most of the dollar revenues in e-commerce involve B2B e-commerce. Much of this activity is unseen and unknown to the average consumer.

Table 2.4 lists the major business models utilized in the B2B arena.

**E-DISTRIBUTOR**

Companies that supply products and services directly to individual businesses are e-distributors. W.W. Grainger, for example, is the largest distributor of maintenance, repair, and operations (MRO) supplies. MRO supplies are thought of as indirect inputs to the production process—as opposed to direct inputs. In the past, Grainger relied on catalog sales and physical distribution centers in metropolitan areas. Its catalog of

table 2.4 lists the major business models utilized in the B2b arena.

### Table 2.4 B2B Business Models

<table>
<thead>
<tr>
<th>Business Model</th>
<th>Examples</th>
<th>Description</th>
<th>Revenue Model</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(1) Net Marketplaces</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>E-Distributor</td>
<td>Grainger.com, FindMRO.com, Staples.com</td>
<td>Single-firm online versions of retail and wholesale stores; supply maintenance, repair, operation goods; indirect inputs</td>
<td>Sales of goods</td>
</tr>
<tr>
<td>E-Procurement</td>
<td>Ariba.com, CommerceOne.com, Siemens</td>
<td>Single firms creating digital markets where thousands of sellers and buyers transact for indirect inputs</td>
<td>Fees for market-making services; supply chain management, and fulfillment services</td>
</tr>
<tr>
<td>Exchanges</td>
<td>Exchange.eSteel.com, IMX.com, GE Polymerland.com</td>
<td>Independently owned digital marketplaces for direct inputs. Vertical industry orientation</td>
<td>Fees and commissions on transactions</td>
</tr>
<tr>
<td>Industry Consortia</td>
<td>Covisint.com, Sciquest.com, Pasticsnet.com</td>
<td>Industry-owned vertical digital markets open to select suppliers.</td>
<td>Fees and commissions on transactions</td>
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<tr>
<td><strong>(2) Private Industrial Networks</strong></td>
<td></td>
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<tr>
<td>Industry-wide networks</td>
<td>Nistevo Inc., Globalnetexchange.com, UCCnet.org, Worldwideretailexchange.org</td>
<td>Industry-owned networks to set standards, coordinate supply and logistics for the industry</td>
<td>Contributions from industry member firms and recovered through production and distribution efficiencies; fees for transactions and services</td>
</tr>
</tbody>
</table>
equipment went online in 1995 at grainger.com, giving businesses access to more than 220,000 items. Company purchasing agents can search by type of product, such as motors, HVAC, or fluids, or by specific brand name.

E-distributors are owned by one company seeking to serve many customers. However, as with B2B hubs (described below), critical mass is a factor. With e-distributors, the more products and services a company makes available on its site, the more attractive that site is to potential customers. One-stop shopping is always preferable to having to visit numerous sites to locate a particular part or product.

Although W.W. Grainger established its Web site in order to conduct business with its customers, General Electric Aircraft Engines backed into its role as an e-distributor. GE Aircraft Engines is such a large purchaser of aircraft engine parts that other purchasers in the aircraft industry almost always need the same parts GE is ordering from vendors. GE decided to make its internal procurement system available at its site, www.geae.com, so that fellow buyers of industrial products and equipment in search of needed parts and machinery could have access. GE and other purchasers can buy together and receive larger discounts for larger orders. In setting itself up as a focal point for such purchasing inquiries, GE improved its own purchasing power and relationships. This decision has created a new profit center for GE and reduced its own cost of acquisition.

**E-PROCUREMENT**

Just as e-distributors provide products to other companies, B2B e-procurement firms create and sell access to digital electronic markets. Firms such as Ariba, for instance, have created software that helps large firms organize their procurement process by creating mini-digital markets for a single firm. Ariba creates custom integrated online catalogs (where supplier firms can list their offerings) for purchasing firms. On the sell side, Ariba helps vendors sell to large purchasers by providing software to handle catalog creation, shipping, insurance, and finance. Both the buy and sell side software is referred to generically as “value chain management” software.

**B2B service providers** make money through transaction fees, fees based on the number of workstations using the service, or annual licensing fees. They offer purchasing firms a sophisticated set of sourcing and supply chain management tools that permit firms to reduce supply chain costs. In the software world, firms such as Ariba and its competitor CommerceOne are called **application service providers (ASPs)**; they are able to offer firms much lower costs of software by achieving **scale economies**. Scale economies arise when large, fixed-cost production systems (such as factories or software systems) can be operated at full capacity with no idle time. In the case of software, the marginal cost of a digital copy of a software program is nearly zero, and finding additional buyers for an expensive software program is exceptionally profitable. This is much more efficient than having every firm build its own supply chain
In December 2002, Canada ratified the Kyoto Protocol, an international treaty for the global regulation of greenhouse gases. Nearly 100 nations, although not as yet the United States, have signed the Kyoto Protocol.

The Kyoto Protocol includes provisions for the use of markets to trade pollution rights as one means to reduce emissions. So far, European countries have taken the lead in establishing B2B marketplaces for the exchange of pollution rights. Britain introduced the world’s first B2B exchange for greenhouse gas emissions, Denmark has a similar plan, and in December 2003, the European Union will begin full-scale trading. One of these markets is www.CO2e.com, a worldwide global trading platform for greenhouse gas pollution rights.

The Chicago Climate Exchange is another market based on voluntary compliance with Kyoto Protocol requirements.

Here’s how it works. A limited number of pollution permits are issued by marketmakers or governments to polluting firms. Firms can then buy and sell them on various markets. Firms that can easily reduce their emissions can sell their rights to others, making the reduction of emissions a profitable endeavor. Firms that cannot easily reduce their pollution must buy pollution permits on the open market, paying a price for polluting. In this manner, the cost of pollution will be included in the cost of products produced by polluting firms, and the price of products will reflect the total social costs of production (what economists call “external” costs of production).

So far, about $200 million tons of greenhouse gas rights have been traded on various B2B marketplaces.
Major Business-to-business (B2B) Business Models

... exchanges, and volumes are growing by about 50% a year. Currently, the right to trade one ton of carbon emissions sells in the $3–$8 range. The price is expected to rise very rapidly once the Kyoto Protocol Treaty goes into full effect in 2008.


management system, and it permits firms like Ariba and CommerceOne to specialize and offer their software to firms at a cost far less than the cost of developing it.

EXCHANGES (B2B HUBS)

Marketplace/exchanges, or B2B hubs, have garnered most of the B2B attention and early funding because of their potential market size even though today they are a small part of the overall B2B picture. An exchange is a digital electronic marketplace where hundreds of suppliers meet a smaller number of very large commercial purchasers (Kaplan and Sawhney, 2000). Exchanges are owned by independent, usually entrepreneurial startup firms whose business is making a market, and they generate revenue by charging a commission or fee based on the size of the transactions conducted among trading parties. They usually serve a single vertical industry such as steel, polymers, or aluminum and focus on the exchange of direct inputs to production and short-term contracts or spot purchasing. For buyers, B2B exchanges make it possible to gather information, check out suppliers, collect prices, and keep up to date on the latest happenings all in one place. Sellers, on the other hand, benefit from expanded access to buyers. The greater the number of sellers and buyers, the lower the sales cost and the higher the chances of making a sale. The ease, speed, and volume of transactions are summarily referred to as market liquidity.

In theory, exchanges make it significantly less expensive and time consuming to identify potential suppliers, customers, and partners, and to do business with each other. As a result, they can lower transaction costs—the cost of making a sale or purchase. B2B hubs can also lower product costs and inventory-carrying costs—the cost of keeping a product on hand in a warehouse. In reality, as discussed in Chapter 12, B2B exchanges have had a difficult time convincing thousands of suppliers to move into singular digital markets where they face powerful price competition, and an equally difficult time convincing businesses to change their purchasing behavior away from trusted long-term trading partners. As a result, the number of exchanges has fallen to about 700 in 2003, down from over 1,500 in 2002, although the surviving firms have experienced some success (Day, Fein, Ruppersberger, 2003). Read Insight on Business: CO2e.com: Global Pollution Market for a more in-depth look at a B2B exchange. On the other hand,
some surviving exchanges like CommerceOne.com have shown extraordinary growth in 2002–2003. CommerceOne reported a 40% increase in trading partners for 2002, processing over 800,000 purchase orders worth $1.5 billion. On the CommerceOne exchange, 70,000 suppliers sell more than 20 million parts and products to a wide range of companies from universities to utilities and aerospace companies (www.commerceone.com, 2003; www.geae.com, 2003; Hidding and Williams, 2003.).

INDUSTRY CONSORTIA

Industry consortia are industry-owned vertical marketplaces that serve specific industries, such as the automobile, aerospace, chemical, floral, or logging industries. In contrast, horizontal marketplaces sell specific products and services to a wide range of companies. Vertical marketplaces supply a smaller number of companies with products and services of specific interest to their industry, while horizontal marketplaces supply companies in different industries with a particular type of product and service, such as marketing-related, financial, or computing services. One of the largest vertical B2B industry consortia is Covisint, the auto parts exchange backed by DaimlerChrysler, Ford, General Motors, Renault, CommerceOne, and Oracle. Formed in October 2000, by March 2003, Covisint had logged over $1 trillion in transactions, conducted 3,300 auction events, and placed over 435 catalogs online (www.covisint.com, 2003). The objective of Covisint is to assist the automobile industry in dramatically increasing the efficiency of the supply chain by both creating digital markets and increasing coordination among buyers and suppliers. A similar consortia, DirectAg.com serves the agricultural market, providing farmers and suppliers with news, commodities pricing, and forecasts, as well as volume purchasing opportunities that help users save time and money on purchases.

Industry consortia have tended to be more successful than independent exchanges in part because they are sponsored by powerful, deep-pocketed industry players, and also because they strengthen traditional purchasing behavior rather than seek to transform it.

PRIVATE INDUSTRIAL NETWORKS

Private industrial networks constitute about 75% of all B2B expenditures by large firms and far exceed the expenditures for all forms of Net marketplaces. Private industrial networks are digital networks (often but not always Internet-based networks) designed to coordinate the flow of communications among firms engaged in business together. For instance, Wal-Mart operates one of the largest private industrial networks in the world for its suppliers, who on a daily basis use Wal-Mart’s network to monitor the sales of their goods, the status of shipments, and the actual inventory level of their goods. About 70% of all B2B e-commerce uses an older technology called electronic data interchange (EDI) (U.S. Department of Commerce, 2003). EDI is useful
for one-to-one relationships between a single supplier and a single purchaser, and originally was designed for proprietary networks, although it is migrating rapidly to the Internet. More powerful Web technologies are replacing EDI in part because they can enable many-to-one, and many-to-many market relationships where there are many suppliers selling to a single or small group of very large purchasers, or, in the case of B2B hubs, there may be many sellers and many buyers simultaneously in the marketplace. EDI is not designed for these types of relationships. There are two types of private industrial networks: single-firm and industry-wide networks.

**Single-firm networks** are the most common form of private industrial network. These single-firm networks are owned by a single large purchasing firm, such as Wal-Mart or Chrysler. Participation is by invitation only to trusted long-term suppliers of direct inputs. Single-firm networks typically evolve out of a firm’s own enterprise resource planning system (ERP), and they are an effort to include key suppliers in the firm’s own business decision making. For instance, DaimlerChrysler’s Supply Partner Information Network (SPIN) allows Chrysler’s 20,000 suppliers in 3,500 locations around the world to access Chrysler’s procurement and demand forecasting system on a daily basis. Suppliers use this information to plan their own production, ship and track parts delivery, and settle payments.

**Industry-wide networks** often evolve out of industry associations. These networks are usually owned by a consortium of the large firms in an industry and have the following goals: providing a neutral set of standards for commercial communication over the Internet; having shared and open technology platforms for solving industry problems; and, in some cases like Globalnet Xchange and Nistevo, providing operating networks that allow members of an entire industry to closely collaborate. To some extent, these industry-wide networks are a response to the success of single-firm networks described above. For instance, Wal-Mart has refused to open its very successful network to other members of the retail industry, in effect to become an industry standard, for fear it will be sharing technology secrets with other retailers like Sears. In response, Sears and other retailers around the world have created their own set of organizations and networks that are open to all in the industry. The World Wide Retail Exchange (WWRE) is a global Internet-based business-to-business exchange for retailers and suppliers designed to facilitate and simplify trading among retailers, suppliers, partners, and distributors. The WWRE currently consists of 61 members from Africa, Asia, Europe, North America, and South America, with combined sales of approximately $900 billion. To date, the WWRE claims to have saved its members over $450 million through the use of online negotiations, its first product offering (www.wwre.org, 2003). In addition, WWRE provides collaborative design tools; planning and management; negotiations and auctions; order execution; demand aggregation; worldwide item management; worldwide logistics; and a global catalog in English, French, German, and Spanish containing trading relationship data for more than 35 member-sponsored suppliers totaling more than 30,000 items. From this list
of services and capabilities, it is clear that industry-wide industrial networks offer much more functionality than industry-owned consortia like Covisint, although the two forms’ B2B models appear to be moving closer together (Gebauer and Zagler, 2000). We discuss these developments and other nuances of B2B commerce in Chapter 12.

### 2.4 BUSINESS MODELS IN EMERGING E-COMMERCE AREAS

When we think about a business, we typically think of a business firm that produces a product or good, and then sells it to a customer. But the Web has forced us to recognize new forms of business, such as consumer-to-consumer e-commerce, peer-to-peer e-commerce, and m-commerce. Table 2.5 lists some of the business models that can be found in these emerging markets.

**CONSUMER-TO-CONSUMER (C2C) BUSINESS MODELS**

Consumer-to-consumer (C2C) ventures provide a way for consumers to sell to each other, with the help of an online business. The first and best example of this type of business is eBay.com, utilizing a market creator business model.

Before eBay, individual consumers used garage sales, flea markets, and thrift shops to both dispose of and acquire used merchandise. With the introduction of online auctions, consumers no longer had to venture out of their homes or offices in order to bid on items of interest, and sellers could relinquish expensive retail space that was no longer needed in order to reach buyers. In return for linking like-minded buyers and sellers, eBay takes a small commission. The more auctions, the more money eBay makes. In fact, it is the one Web site that has been profitable from day one—and has stayed so for several years.

#### TABLE 2.5 BUSINESS MODELS IN EMERGING E-COMMERCE AREAS

<table>
<thead>
<tr>
<th>BUSINESS MODEL</th>
<th>MODEL</th>
<th>EXAMPLES</th>
<th>DESCRIPTION</th>
<th>REVENUE MODEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer-to-consumer</td>
<td>Market Creator</td>
<td>eBay.com</td>
<td>Helps consumers connect with other consumers to conduct business</td>
<td>Transaction fees</td>
</tr>
<tr>
<td>Peer-to-peer</td>
<td>Content provider</td>
<td>Half.com</td>
<td>Technology enabling consumers to share files and services via the Web, without common servers</td>
<td>Subscription fees, advertising, transaction fees</td>
</tr>
<tr>
<td>M-Commerce</td>
<td>Various</td>
<td>Kaza.com</td>
<td>Extending business applications using wireless technology</td>
<td>Sales of goods and services</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Groovenetworks.com</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Armani</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Skyline Chili</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Consumers who don’t like auctions but still want to find used merchandise can visit Half.com (also owned by eBay), which enables consumers to sell off unwanted books, movies, music, and games to other consumers. Unlike eBay, it allows sellers to set a fixed-price for each item, rather than putting it up for bid. In return for facilitating a transaction, Half.com takes a 15% commission on the sale, plus a fraction of the shipping fee it charges. It, too, is doing well.

**PEER-TO-PEER (P2P) BUSINESS MODELS**

Like the C2C models, P2P business models link users, enabling them to share files and computer resources without a common server. The focus in P2P companies is on helping individuals make information available for anyone’s use by connecting users on the Web. Historically, peer-to-peer software technology has been used to allow the sharing of copyrighted music files in violation of digital copyright law. The challenge for P2P ventures is to develop viable, legal business models that will enable them to make money. In Chapter 1, we discussed the difficulties faced by Kazaa.com, one of the most prominent examples of a P2P business model in action. One area of growth for peer-to-peer business models is the use of this technology for the coordination of work in a firm. Groovenetworks.com builds client and server software that helps employees share files, calendars, work schedules, and plans without burdening central servers (www.groovenetworks.com). However, to date, there are few if any examples of successful P2P e-commerce business models outside of the music and content file swapping sites.

**M-COMMERCE BUSINESS MODELS**

M-commerce, short for *mobile-commerce*, takes traditional e-commerce models and leverages emerging new wireless technologies—described more fully in Chapter 3—to permit mobile access to the Web. Wireless networks utilize newly available bandwidth and communication protocols to connect mobile users to the Internet. These technologies have already taken off in Japan and Europe, and will expand greatly in the United States in a few years. The major advantage of m-commerce is that it provides Internet access to anyone, anytime, and anywhere, using wireless devices. The key technologies here are telephone-based 3G (third generation wireless), Wi-Fi (wireless local area networks), and Bluetooth (short range radio frequency Web devices). Worldwide expansion in 3G telephone networks proceeded briskly until January 2002, after which there was considerable reduction in 3G plans in Europe and the United States. At the same time, a newer wireless technology called Wi-Fi has exploded in the United States; analysts estimate that 6 million persons in the United States currently use wireless (Wi-Fi) laptop computers (Young, 2003). There are many more cell phone subscribers than there are Internet users: There are an estimated one billion cell phone users worldwide in 2003. In general, wireless Web technology
will enable the extension of existing Web business models to service the mobile work force and consumer of the future. In the United States, cell phone use is considerably less than in Europe or Japan. However, the marriage of hand-held personal digital assistants with the cell phone has brought about a resurgence of interest in 3G technologies and their potential role in e-commerce.

To date, mobile commerce in the United States has been a disappointment. Actual sales consummated from mobile devices in the United States in 2002 are below $100 million (Forrester, 2002). In contrast, Japanese mobile e-commerce sales will total $1.4 billion in 2003 (Kunii and Ihlwan, 2003). As early as 1999, Amazon developed mobile access to its site, believing this was a major new access point, but since then the company has let this initiative lapse. However, the technology platform continues to evolve rapidly as hand-held personal digital assistants (PDAs) merge with cell phone capability (and vice versa). The server side hardware and software platform is nearly in place, and the basic bandwidth is ready. As with all areas of e-commerce, the challenge for businesses will be finding ways to use m-commerce to make money while serving customer needs. Mobile commerce appears to have more current applications within the firm than with consumer transactions. For instance, Giorgio Armani in New York uses wireless hand-held computers to connect sales people with inventory as part of a customer relationship management system (Ewalt, 2002). Con-
sumer applications are appearing in high-volume personal transaction areas such as wireless bank services (www.netbank.com), stock trading and portfolio management at Charles Schwab (www.cybertrader.com), Moviefone’s reservation system (www.moviefone.com), and mobile payments.

M-commerce business models that hope to rely on push advertising, as described in Insight on Society: Is Privacy Possible in a Wireless World? also may face an uphill battle.

**E-COMMERCE ENABLERS: THE GOLD RUSH MODEL**

Of the nearly 500,000 miners who descended on California in the Gold Rush of 1849, fewer than 1% ever achieved significant wealth. However, the banking firms, shipping companies, hardware companies, real estate speculators, and clothing companies such as Levi Strauss built long-lasting fortunes. Likewise in e-commerce. No discussion of e-commerce business models would be complete without mention of a group of companies whose business model is focused on providing the infrastructure necessary for e-commerce companies to exist, grow, and prosper. These are the e-commerce enablers: the Internet infrastructure companies. They provide the hardware, operating system software, networks and communications technology, applications software, Web designs, consulting services, and other tools that make e-commerce over the Web possible (see Table 2.6). While these firms may not be

<table>
<thead>
<tr>
<th>TABLE 2.6 E-COMMERCE ENABLERS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INFRASTRUCTURE</strong></td>
</tr>
<tr>
<td>Hardware: Web Servers</td>
</tr>
<tr>
<td>Software: Operating Systems and Server Software</td>
</tr>
<tr>
<td>Networking: Routers</td>
</tr>
<tr>
<td>Security: Encryption Software</td>
</tr>
<tr>
<td>E-commerce Software Systems (B2C, B2B)</td>
</tr>
<tr>
<td>Streaming Media Solutions</td>
</tr>
<tr>
<td>Customer Relationship Management Software</td>
</tr>
<tr>
<td>Payment Systems</td>
</tr>
<tr>
<td>Performance Enhancement</td>
</tr>
<tr>
<td>Databases</td>
</tr>
<tr>
<td>Hosting Services</td>
</tr>
</tbody>
</table>
CHAPTER 2  E-commerce Business Models and Concepts

92  C H A P T E R  2  E - c o m m e r c e  B u s i n e s s  M o d e l s  a n d  C o n c e p t s

INSIGHT ON SOCIETY

IS PRIVACY POSSIBLE IN A WIRELESS WORLD?

You’re walking past the local Pizza Hut and your cell phone rings. Who’s calling? No, it’s not your significant other or a parent or friend. It’s Pizza Hut. They just wanted to let you know that pizzas are on sale—two for one, until 6 P.M. today. Want to find out someone’s address when you know their home phone number and then get a map to that location? Go to www.google.com and enter that person’s phone number. The top listing will provide you the name and address of the owner of that phone number. Click a button and you will get a map to the house or business. Google calls it Phonebook, but it never asked you to join. You could opt out if you search hard enough. Or let’s say you want to set up a wireless network in your house using Wi-Fi (short for an 802.11b radio network). Your neighbor will possibly be able to pick up your signals (and network traffic) if they are within 300 feet of your base station and “join” your network.

These scenarios are not far-fetched, but instead represent capabilities of existing technology. Some of these capabilities have benign or even humanitarian intentions. For instance, since October 2001, all cell phone providers were required to implement “E911” (Emergency 911), in which your cell phone’s embedded GPS chips (global positioning chips) can be tracked by emergency responders or law enforcement even if the phone is not turned on, and to automatically track the location of phones that are turned on. In true emergencies, these capabilities are helpful. If you are in an emergency and use your cell phone to call for help, authorities can find your location nearly instantly.

But while the primary goal of these wireless tracking capabilities is enhanced public safety, companies are already developing business models centered on applications that will allow them to exploit the technology. Called “location services,” companies like MapQuest work with local businesses to provide directions to restaurants, theaters, and other attractions over cell phones. And with over 140 million cell phone users in the United States today, there are significant business opportunities for telephone carriers, mapping services, and local businesses.

The specter of more unsolicited, unwanted phone calls coupled with “Big Brother”-like location tracking has privacy advocates raising the alarm. “Developing wireless technology shows many indications of repeating two privacy disasters of the wired Internet—spam and nonconsensual tracking,” said one privacy expert.

The wireless industry, mindful of the privacy issues raised in the online e-commerce context, has issued calls for stringent self-regulation in an attempt to avoid government-imposed regulation. For instance, a wireless industry trade group whose members include AT&T Wireless, Sprint, and Microsoft has recommended that consumers be given the choice as to whether they want to participate in such services.

How to implement giving consumers that choice is also controversial, however. For (continued)
instance, most privacy advocates recommend a “double opt-in” system, where customers are not subjected to receiving services or information unless they specifically request them, and then confirm that request. Many companies, on the other hand, would rather implement choice through an “opt-out” system, which allows them to send a customer information or services until the customer informs the company that he or she does not want to receive them.

There are some technology solutions. Mobile-Cloak.com sells a nylon bag with an aluminum sheet that prevents your cell phone from responding to central office efforts at GPS tracking, and Norton sells a firewall for wireless networks that provides as much protection as you have on a land line. For now, wireless location-based services remain unregulated. Will consumers be so enthralled with the idea of services tailored to their specific location that they won’t mind being tracked? Privacy watchdogs don’t think so and predict that any company whose business model is predicated on that assumption is underestimating the increasing sensitivity of the American public to privacy concerns in the E-commerce II era.

conducting e-commerce per se (although in many instances, e-commerce in its traditional sense is in fact one of their sales channels), they as a group have perhaps profited the most from the development of e-commerce. We will discuss many of these players in the following chapters.

2.5 HOW THE INTERNET AND THE WEB CHANGE BUSINESS: STRATEGY, STRUCTURE, AND PROCESS

Now that you have a clear grasp of the variety of business models used by e-commerce firms, you also need to understand how the Internet and the Web have changed the business environment in the last decade, including industry structures, business strategies, and industry and firm operations (business processes and value chains). We will return to these concepts throughout the book as we explore the e-commerce phenomenon. In general, the Internet is an open standards system available to all players, and this fact inherently makes it easy for new competitors to enter the marketplace and offer substitute products or channels of delivery. The Internet tends to intensify competition. Because information becomes available to everyone, the Internet inherently shifts power to buyers who can quickly discover the lowest-cost provider on the Web. On the other hand, the Internet presents many new opportunities for creating value, for branding products and charging premium prices, and for enlarging an already powerful offline physical business such as Wal-Mart or Sears.
Recall Table 1.1 in Chapter 1 that describes the truly unique features of e-commerce technology. Table 2.7 suggests some of the implications of each unique feature for the overall business environment—industry structure, business strategies, and operations.

### INDUSTRY STRUCTURE

E-commerce changes industry structure, in some industries more than others. **Industry structure** refers to the nature of the players in an industry and their relative bargaining power.

<table>
<thead>
<tr>
<th>FEATURE</th>
<th>SELECTED IMPACTS ON BUSINESS ENVIRONMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ubiquity</td>
<td>Alters industry structure by creating new marketing channels and expanding size of overall market. Creates new efficiencies in industry operations and lowers costs of firms' sales operations. Enables new differentiation strategies.</td>
</tr>
<tr>
<td>Global reach</td>
<td>Changes industry structure by lowering barriers to entry, but greatly expands market at same time. Lowers cost of industry and firm operations through production and sales efficiencies. Enables competition on global scope.</td>
</tr>
<tr>
<td>Universal standards</td>
<td>Changes industry structure by lowering barriers to entry and intensifying competition within an industry. Lowers costs of industry and firm operations by lowering computing and communications costs. Enables broad scope strategies.</td>
</tr>
<tr>
<td>Richness</td>
<td>Alters industry structure by reducing strength of powerful distribution channels. Changes industry and firm operations cost by reducing reliance on sales forces. Enhances post-sales support strategies.</td>
</tr>
<tr>
<td>Interactive</td>
<td>Alters industry structure by reducing threat of substitutes through enhanced customization. Reduces industry and firm costs by reducing reliance on sales forces. Enables Web-based differentiation strategies.</td>
</tr>
<tr>
<td>Personalization/Customization</td>
<td>Alters industry structure by reducing threats of substitutes, raising barriers to entry. Reduces value chain costs in industry and firms by lessening reliance on sales forces. Enables personalized marketing strategies.</td>
</tr>
<tr>
<td>Information density</td>
<td>Changes industry structure by weakening powerful sales channels, shifting bargaining power to consumers. Reduces industry and firm operations costs by lowering costs of obtaining, processing, and distributing information about suppliers and consumers.</td>
</tr>
</tbody>
</table>
tive bargaining power. An industry’s structure is characterized by five forces: rivalry among existing competitors, the threat of substitute products, barriers to entry into the industry, the bargaining power of suppliers, and the bargaining power of buyers (Porter, 1985). When you describe an industry’s structure, you are describing the general business environment in an industry and the overall profitability of doing business in that environment. E-commerce has the potential to change the relative strength of these competitive forces (see Figure 2.2).

When you consider a business model and its potential long-term profitability, you should always perform an industry structural analysis. An industry structural analysis is an effort to understand and describe the nature of competition in an industry, the nature of substitute products, the barriers to entry, and the relative strength of consumers and suppliers.

E-commerce can affect the structure and dynamics of industries in very different ways. Consider the recorded music industry, an industry which has experienced significant change because of the Internet and e-commerce. Historically, the major record label firms owned the exclusive rights to the recorded music of various artists. With the entrance into the market place of substitute providers such as Kazaa, millions of consumers began to use the Internet to bypass traditional music labels and their distributors entirely. In the travel industry, entirely new middlemen such as Travelocity have entered the market to compete with traditional travel agents. After Travelocity, Expedia, CheapTickets and other travel services demonstrated the power of e-commerce marketing for airline tickets, the actual owners of the airline seats—the major airlines—banded together to form their own Internet outlet for tickets, Orbitz.com, for direct sales to consumers, potentially eliminating the middlemen entirely. Clearly, e-commerce and the Internet create new industry dynamics that can best be described as the give and take of the marketplace, the changing fortunes of competitors.

Yet in other industries, the Internet and e-commerce have strengthened existing players. In the chemical and automobile industries, e-commerce is being used effectively by manufacturers to strengthen their traditional distributors. In these industries, e-commerce technology has not fundamentally altered the competitive forces—bargaining power of suppliers, barriers to entry, bargaining power of buyers, threat of substitutes, or rivalry among competitors—within the industry. Hence, each industry is different and you need to examine each one carefully to understand the impacts of e-commerce on competition and strategy.

New forms of distribution created by new market entrants can completely change the competitive forces in an industry. For instance, if a software firm such as Microsoft discovers that consumers will gladly substitute a $50 or even free encyclopedia on a CD-ROM (a digital information product) for a $2,500 set of Britannica encyclopedias (a physical information product), then the competitive forces in the encyclopedia industry are radically changed. Even if the substitute is an inferior
product, consumers are able to satisfy their anxieties about their children’s education at a much lower cost (Gerace, 1999).

Inter-firm rivalry (competition) is one area of the business environment where e-commerce technologies have had an impact on most industries. In general, the Internet has increased price competition in nearly all markets. It has been relatively easy for existing firms to adopt e-commerce technology and attempt to use it to achieve competitive advantage vis-à-vis rivals. For instance, the Internet inherently changes the scope of competition from local and regional to national and global. Because consumers have access to global price information, the Internet produces pressures on firms to compete by lowering prices (and lowering profits). On the other hand, the Internet has made it possible for some firms to differentiate their product or services from others. Amazon.com has patented one-click purchasing for instance, while eBay has created a unique, easy-to-use interface and a differentiating brand name. REI, Inc.—a specialty mountain climbing-oriented sporting goods company—has been able to use its Web site to maintain its strong niche focus on outdoor gear. Therefore, although the Internet has increased emphasis on price competition, it has also enabled businesses to create new strategies for differentiation and branding so that they can retain higher prices.

It is impossible to determine if e-commerce technologies have had an overall positive or negative impact on firm profitability in general. Each industry is unique, so it is necessary to perform a separate analysis for each one. Clearly, in some industries, in particular, information product industries such as the music, newspaper, book, and software industries, as well as other information-intensive industries such as financial services, e-commerce has shaken the foundations of the industry. In these industries, the power of consumers has grown relative to providers, prices have fallen, and overall profitability has been challenged. In other industries, especially manufacturing, the Internet has not greatly changed relationships with buyers, but has changed relationships with suppliers. Increasingly, manufacturing firms in entire industries have banded together to aggregate purchases, create industry digital exchanges or marketplaces, and outsource industrial processes in order to obtain better prices from suppliers. Throughout this book, we will document these changes in industry structure and market dynamics introduced by e-commerce and the Internet.

INDUSTRY VALUE CHAINS

While an industry structural analysis helps us understand the impact of e-commerce technology on the overall business environment in an industry, a more detailed industry value chain analysis can help identify more precisely just how e-commerce may change business operations at the industry level (Benjamin and Wigand, 1995). One of the basic tools for understanding the impact of information technology on industry and firm operations is the value chain. The concept is quite simple: A value chain is the

value chain
the set of activities performed in an industry or in a firm that transforms raw inputs into final products and services
set of activities performed in an industry or in a firm that transforms raw inputs into final products and services. Each of these activities adds economic value to the final product; hence, the term value chain as an interconnected set of value-adding activities. Figure 2.3 illustrates the six generic players in an industry value chain: suppliers, manufacturers, transporters, distributors, retailers, and customers.

By reducing the cost of information, the Internet offers each of the key players in an industry value chain new opportunities to maximize their positions by lowering costs and/or raising prices. For instance, manufacturers can reduce the costs they pay for goods by developing Web-based B2B exchanges with their suppliers. Manufacturers can develop direct relationships with their customers through their own Web sites, bypassing the costs of distributors and retailers. Distributors can develop highly efficient inventory management systems to reduce their costs; retailers can develop highly efficient customer relationship management systems to strengthen their service to customers. Customers in turn can use the Web to search for the best quality, fastest delivery, and lowest prices, thereby lowering their transaction costs and reducing prices they pay for final goods. Finally, the operational efficiency of the entire industry can increase, lowering prices and adding value to consumers, and helping the industry to compete with alternative industries. Dell Computer Corporation, for instance, employs a number of these stratagems, most notably a sales model for personal computers that bypasses traditional retail distribution channels by selling...
directly to consumers over the Web. Dell also has developed a highly efficient supply chain management system to reduce its costs, and an equally efficient customer relationship management system to support customers and add to the value of its products.

**FIRM VALUE CHAINS**

The concept of value chain can be used to analyze a single firm’s operational efficiency as well. The question here is: How does e-commerce technology potentially affect the value chains of firms within an industry? A firm value chain is the set of activities a firm engages in to create final products from raw inputs. Each step in the process of production adds value to the final product. In addition, firms develop support activities that coordinate the production process and contribute to overall operational efficiency. Figure 2.4 illustrates the key steps and support activities in a firm’s value chain.

The Internet offers firms many opportunities to increase their operational efficiency and differentiate their products. For instance, firms can use the Internet’s communications efficiency to outsource some primary and secondary activities to

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**FIGURE 2.4 E-COMMERCE AND FIRM VALUE CHAINS**

<table>
<thead>
<tr>
<th>Secondary Activities</th>
<th>Primary Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration</td>
<td>Inbound Logistics</td>
</tr>
<tr>
<td>Human Resources</td>
<td>Operations</td>
</tr>
<tr>
<td>Information Systems</td>
<td>Outbound Logistics</td>
</tr>
<tr>
<td>Procurement</td>
<td>Sales and Marketing</td>
</tr>
<tr>
<td>Finance/Accounting</td>
<td>After Sales Service</td>
</tr>
</tbody>
</table>

Every firm can be characterized by a set of value-adding primary and secondary activities performed by a variety of actors in the firm. A simple firm value chain performs five primary value-adding steps: inbound logistics, operations, outbound logistics, sales and marketing, and after-sales support.

specialized, more efficient providers without such outsourcing being visible to the consumer. In addition, firms can use the Internet to more precisely coordinate the steps in the value chains and reduce their costs. Finally, firms can use the Internet to provide users with more differentiated and high-value products. For instance, Amazon.com uses the Internet to provide consumers with a much larger inventory of books to choose from, at a lower cost, than traditional book stores. It also provides many services—such as instantly available professional and consumer reviews, and information on buying patterns of other consumers—that traditional bookstores cannot.

**FIRM VALUE WEBS**

While firms produce value through their value chains, they also rely on the value chains of their partners—their suppliers, distributors, and delivery firms. The Internet creates new opportunities for firms to cooperate and create a value web. A **value web** is a networked business ecosystem that uses Internet technology to coordinate the value chains of business partners within an industry, or at the first level, to coordinate the value chains of a group of firms. Figure 2.5 illustrates a value web.

A value web coordinates a firm’s suppliers with its own production needs using an Internet-based supply chain management system. We discuss these B2B systems in Chapter 12. Firms also use the Internet to develop close relationships with their logistics partners. For instance, Amazon relies on UPS tracking systems to provide its customers with online package tracking, and it relies on the U.S. Post Office systems to insert packages directly into the mail stream. Amazon has partnership relations with hundreds of firms, including ToysRUs, to generate customers and to manage relationships with customers (online Customer Relationship Management systems are discussed in Chapter 7). In fact, when you examine Amazon closely, you realize that the value it delivers to customers is in large part the result of coordination with other firms and not simply the result of activities internal to Amazon. The value of Amazon is, in large part, the value delivered by its value web partners. This is difficult for other firms to imitate in the short run.

**BUSINESS STRATEGY**

A **business strategy** is a set of plans for achieving superior long-term returns on the capital invested in a business firm. A business strategy is therefore a plan for making profits in a competitive environment over the long term. Profit is simply the difference between the price a firm is able to charge for its products and the cost of producing and distributing goods. **Profit** represents economic value. Economic value is created anytime customers are willing to pay more for a product than it costs to produce. Why would anyone pay more for a product than it costs to produce? There are...
multiple answers. The product may be unique (there are no other suppliers), it may be the least costly product of its type available, consumers may be able to purchase the product anywhere in the world, or it may satisfy some unique needs that other products do not. Each of these sources of economic value define a firm’s strategy for positioning its products in the marketplace. There are four generic strategies for achieving a profitable business: differentiation, cost, scope, and focus. We describe each of these below. The specific strategies that a firm follows will depend on the product, the industry, and the marketplace where competition is encountered.

Although the Internet is a unique marketplace, the same principles of strategy and business apply. As we will see throughout the book, successful e-commerce strategies involve using the Internet to leverage and strengthen existing business (rather than destroy your business), and to use the Internet to provide products
and services your competitors cannot copy (in the short term anyway) and that
means developing unique products, proprietary content, distinguishing processes
(like Amazon’s one-click shopping), and personalized or customized services and
products. Let’s examine these ideas more closely (Porter, 2001).

**Differentiation** refers to all the ways producers can make their products unique
and distinguish them from those of competitors. The opposite of differentiation is
**commoditization**—a situation where there are no differences among products or
services, and the only basis of choosing a product is price. As economists tell us,
when price alone becomes the basis of competition and there are many suppliers
and many customers, eventually the price of the good falls to the cost to produce it
(marginal revenues from the nth unit equal marginal costs). And then profits are
zero! This is an unacceptable situation for any business person. The solution is to dif-
ferrentiate your product and to create a monopoly-like situation where you are the
only supplier.

There are many ways businesses differentiate their products. A business may
start with a core generic product, but then create expectations among users about the
“experience” of consuming the product—“Nothing refreshes like a Coke!” or “Nothing
equals the experience of driving a BMW.” Businesses may also augment products by
adding features to make them different from those of competitors. And businesses
can differentiate their products further by enhancing the products’ abilities to solve
related consumer problems. For instance, tax programs such as Turbo Tax can import
data from spreadsheet programs, as well as be used to electronically file tax returns.
These capabilities are enhancements to the product that solve a customer’s problems.
The purpose of marketing is to create these differentiation features and to make the
consumer aware of the unique qualities of products, creating in the process a “brand”
that stands for these features. We discuss marketing and branding in Chapter 7.

In their totality, the differentiation features of a product constitute the customer
value proposition we described in earlier sections of this chapter. The Internet and
the Web offer some unique ways to differentiate products. The ability of the Web to
personalize the shopping experience and to customize the product or service to the
particular demands of each consumer are perhaps the most significant ways in which
the Web can be used to differentiate products. E-commerce businesses can also dif-
ferentiate products by leveraging the ubiquitous nature of the Web (by making it possible
to purchase the product from home, work, or on the road); the global reach of the
Web (by making it possible to purchase the product anywhere in the world); richness
and interactivity (by creating Web-based experiences for people who use the product,
such as unique interactive content, videos, stories about users, and reviews of users);
and information density (by storing and processing information for consumers of the
product, such as warranty information on all products purchased through a site or
income tax information online).
Adopting a strategy of cost competition means a business has discovered some unique set of business processes or resources that other firms cannot obtain in the marketplace. Business processes are the atomic units of the value chain. For instance, the set of value-creating activities called Inbound Logistics in Figure 2.4 is in reality composed of many different collections of activities performed by people on the loading docks and in the warehouses. These different collections of activities are called business processes—the set of steps or procedures required to perform the various elements of the value chain.

When a firm discovers a new, more efficient set of business processes, it can obtain a cost advantage over competitors. Then it can attract customers by charging a lower price, while still making a handsome profit. Eventually, its competitors go out of business as the market decisively tilts toward the lowest cost provider. Or, when a business discovers a unique resource, or lower cost supplier, it can also compete effectively on cost. For instance, switching production to low wage cost areas of the world is one way to lower costs.

Competing on cost can be a short-lived affair and very tricky. Competitors can also discover the same or different efficiencies in production. And competitors can also move production to low-cost areas of the world. Also, competitors may decide to lose money for a period as they compete on cost.

The Internet offers some new ways to compete on cost—at least in the short term. Firms can leverage the Internet’s ubiquity by lowering the costs of order entry (the customer fills out all the forms, so there is no order entry department); leverage global reach and universal standards by having a single order entry system worldwide; and leverage richness, interactivity, and personalization by creating customer profiles online and treating each individual consumer differently—without the use of an expensive sales force that performed these functions in the past. Finally, firms can leverage the information intensity of the Web by providing consumers with detailed information on products, without maintaining either expensive catalogs or a sales force.

While the Internet offers powerful capabilities for intensifying cost competition, making cost competition appear to be a viable strategy, the danger is that competitors have access to the same technology. The factor markets—where producers buy their supplies—are open to all. Assuming they have the skills and organizational will to use the technology, competitors can buy many of the same cost-reducing techniques in the marketplace. Even a skilled labor force can be purchased, ultimately. However, self-knowledge, proprietary tacit knowledge (knowledge that is not published or codified), and a loyal, skilled workforce are in the short term difficult to purchase in factor markets. Therefore, cost competition remains a viable strategy.

Two other generic business strategies are scope and focus. A scope strategy is a strategy to compete in all markets around the globe, rather than merely in local,
regional, or national markets. The Internet's global reach, universal standards, and ubiquity can certainly be leveraged to assist businesses in becoming global competitors. Yahoo, for instance, along with all of the other top twenty e-commerce sites, has readily attained a global presence using the Internet. A focus strategy is a strategy to compete within a narrow market segment or product segment. This is a specialization strategy with the goal of becoming the premier provider in a narrow market. For instance, Amazon.com started out focusing on books, and later CDs (rather than attempt to become a general retail department store); L.L. Bean uses the Web to continue its historic focus on outdoor sports apparel; and W.W. Grainger—the Web's most frequently visited B2B site—focuses on a narrow market segment called MRO: maintenance, repair, and operations of commercial buildings. The Internet offers some obvious capabilities that enable a focus strategy. Firms can leverage the Web's rich interactive features to create highly focused messages to different market segments; the information intensity of the Web makes it possible to focus e-mail and other marketing campaigns on small market segments; personalization—and related customization—means the same product can be customized and personalized to fulfill the very focused needs of specific market segments and consumers.

Industry structure, industry and firm value chains, value webs, and business strategy are central business concepts used throughout this book to analyze the viability of and prospects for e-commerce sites. In particular, the signature case studies found at the end of each chapter are followed with questions that may ask you to identify the competitive forces in the case, or analyze how the case illustrates changes in industry structure, industry and firm value chains, and business strategy. E-Commerce in Action cases (found in Chapters 10–14) also use these concepts when analyzing specific firms.
Priceline.com is one of the Web’s most well-known companies. Its “name your price” reverse-auction pricing system (what the company refers to as a demand collection system) is a unique business model that uses the information sharing and communications power of the Internet to create a new way of pricing products and services. At Priceline.com, consumers can enter a bid for travel, hotels, rental cars, and even home financing. Priceline queries its vendors (airline, hotel, and financial service firms) to see if anyone will accept the bid. Priceline offers a compelling value proposition to customers, allowing them to save money by trading off flexibility about brands, product features, and/or sellers in return for lower prices; vendors also can gain additional revenue by selling products they might not otherwise be able to sell by accepting below-retail price offers, without disrupting their existing distribution channels or retail pricing structure. Priceline is an example of using the Web to achieve efficient price discrimination: charging some consumers much more than others for the same product. Since beginning operations in April 1998, Priceline has registered over 16 million users. In 2002, Priceline sold 2.9 million airline tickets, 4.1 million hotel room nights, and 2.8 million rental car days. Sounds like a promising e-commerce story.

The original vision of Priceline’s founder Jay Walker was called “demand collection.” Walker poured millions into the concept of a one-stop shopping center for goods and services from trucks and toothpaste, to trucks and vacation travel. But for most of its history, Priceline has not been profitable, although it has had profitable quarters. In 1999, it lost over $1 billion. It pared losses to $15 million by 2001, but in 2002, posted a $23 million dollar loss. Priceline’s stock has been on a roller coaster: as high as $160 in 1999 to a low of $1 in December 2000. Currently the stock sells in the single digits. Key executives have resigned. Headlines such as “Priceline on the Ropes” and “Curtain Call for Priceline.com” predominated in 2001 after the September 11 tragedy. The company has sought desperately to evolve its business model in tumultuous times.

The question is: Can Priceline survive? What went wrong with a business model that seemed so promising?

Priceline commenced operations on April 6, 1998, with the sale of airline tickets. To purchase a ticket, a customer logs onto Priceline.com’s Web site, specifies the origin and destination of the trip, the dates he or she wishes to depart, the price the customer
is willing to pay, and a valid credit card to guarantee the offer. The customer must agree to fly on any major airline, leave at any time of day between 6 A.M. and 10 P.M., accept at least one stop or connection, receive no frequent flier miles or upgrades, and accept tickets that cannot be refunded or changed. Upon receiving the offer, Priceline checks the available fares, rules, and inventory provided by its participating airlines and determines whether it will fulfill the order at the requested price. If so, it notifies the customer within an hour that his or her offer has been accepted. Priceline's airline reservation business is very profitable. It buys excess capacity from the airlines, marks up the tickets, and resells them to consumers. It makes a $35 profit on a $200 ticket compared to travel agents, who make only $5 on the same ticket.

On the consumer side, a central premise of Priceline's business model is that in many product and service categories, there are a significant number of consumers for whom brands, product features, and sellers are interchangeable, particularly if agreeing to a substitution among brands or sellers will result in saving money. On the vendor side, the Priceline business model is predicated on the assumption that sellers almost invariably have excess inventory or capacity that they would sell at lower
prices, if they could do so without either lowering their prices to retail customers or advertising that lower prices are available. Priceline believed that its business model was ideally suited to industries characterized by expiring or rapidly aging inventory (for example, airline seats not sold by the time a flight takes off or hotel rooms not rented), although it did not think that it would be limited to such industries.

Priceline extended its system to hotel reservations in October 1998, and in January 1999, introduced home financing services. It went public in March 1999, and later that year, it added rental cars and even new cars to the mix. To promote its products and the Priceline brand, Priceline embarked on an extensive (and expensive) advertising campaign, hiring William Shatner to become the voice of Priceline, and it quickly became one of the most recognizable brands on the Web.

At the beginning of 2000, Priceline licensed its patented “Name Your Own Price” business model to several affiliates, including Priceline Webhouse Club, which attempted to extend the model to groceries and gasoline, and Perfect Yardsale, which used the model to sell used goods online, and added long distance calling and travel insurance. Priceline also had ambitious plans to expand internationally, and in 2000, licensed its business model to companies planning to set up similar operations in Asia and Australia.

However, by fall 2000, the picture no longer looked so rosy. In October 2000, after only 10 months of operation, Priceline’s affiliate Priceline Webhouse Club, unable to raise additional financing, shut down its business, after running through $363 million. The financial climate at the time, with its renewed emphasis on profitability, made it impossible for Jay Walker, Priceline’s founder, to raise the additional hundreds of millions that would be required before Webhouse might become profitable. Walker did not see the closure as a failure of the Priceline business model, however. Instead, he characterized it as the result of the “fickle sentiments” of investors: “It’s like having your baseball game rained out when you’re ahead,” he said. “It doesn’t say anything about your ball team. It’s just about the weather.”

Many analysts did not accept Walker’s characterization. Instead, they pointed to other factors. First, many of the major manufacturers of food and dried goods chose not to participate in Priceline Webhouse. So, to generate consumer interest, Priceline Webhouse subsidized discounts on most products itself. Although some major manufacturers, such as Kellogg’s and Hershey’s, did eventually sign up, many, such as Kraft, Procter & Gamble, and Lever Brothers, did not. The second miscalculation was that bidding on groceries and gasoline did not exactly provide a “hassle-free” way to shop. Customers were required to bid on and pay for groceries online, then use a special identification card to pick them up at a participating supermarket. If the particular items purchased were not available at the store, the customer would either have to go to another store, or return at another time. To many, the demise of Priceline Webhouse highlighted potential cracks in the Priceline business model and raised

New management sharply curtailed Priceline’s expansion and laid off over a thousand employees. The new Chairman, Richard Braddock, said, “Priceline will entertain selective expansion ... with stringent financial controls. We’re going to make money on this and move forward.” In 2002, Priceline focused on its core business of travel reservations. It signed an agreement with eBay in January 2002 to be an exclusive provider of airline and hotel booking services on eBay. In March 2003, it signed an agreement with a potential competitor Travelweb.com—a consortium of five large hotel chains—to purchase 14% of Travelweb and sell excess capacity that the hotels themselves could not dispose of on their sites. It opened a new Web site called Lowestfare.com that allows users to see the brand names and exact locations before they book rooms sold by Travelweb. Priceline collects a 10% commission. The agreement with Travelweb made a potential fierce competitor an ally and new revenue source. Currently, over 20% of hotel books in the United States occur through online services, up from 9% in 2002. Also, in March 2003, Priceline struck a deal with Budgethotels Network—a consortium of budget hotels—to create co-branded Web sites that link www.budgethotels.com to Priceline’s name-your-own price services for airlines, hotel rooms, and rental cars. Along with Travelocity, Priceline entered the cruise reservation business. Cruise reservations were thought to be too difficult to book online because of all the special vocabulary of ocean-going ships (like “access to lido”). But online cruise reservations have doubled from 1.3% of the market in 2001, to 2.7% in 2003. Priceline focuses on “distressed inventory” that it purchases from the cruise ship owners at very low prices.

While these strategic moves by Priceline to shore up its focus on airline and guest service reservations have helped sustain revenues of just over $1 billion in 2002, its gross revenues still declined $170 million since 2001. Priceline faces industry-wide shrinkage in all forms of travel caused by the fear of terrorism and war. With major airlines cutting back capacity by up to 30%, there are fewer discount seats to sell, hurting Priceline’s volume. In addition, Priceline faces extraordinary competition, not just from other online middlemen such as Expedia, Hotels.com, CheapTickets.com, and Travelocity, but also from the direct discount sales by the airlines on Orbitz.com and hotels on Travelweb.com. On one of its affiliated Web sites, Priceline has begun to join other industry participants in permitting consumers to know the precise brands of airlines and hotels. Competitors like Biddingfortravel.com and Flyertalk.com are cutting into Priceline’s market by providing users with the exact price people are paying for hotels and airfares. However, the company has assiduously focused on its core competencies and on efficient execution and in 2002, reduced its overall loss to $20 million. Even though right now it looks as if Priceline will survive, the question still remains: Will it ever really succeed?
Case Study Questions

1. What are the core components of Priceline.com’s business model?

2. Do you think Priceline will ultimately succeed or fail? Why?

3. How has Priceline (and similar online services) impacted the travel services industry?

4. Follow up on developments at Priceline since April 2003 when this case study was prepared. Has its business model and/or strategy changed at all, and if so, how? Who are its strongest competitors? Has it achieved profitability or is it still operating at a loss?

KEY CONCEPTS

- Identify the key components of e-commerce business models.

A successful business model effectively addresses eight key elements:

- **Value proposition**—how a company’s product or service fulfills the needs of customers. Typical e-commerce value propositions include personalization, customization, convenience, and reduction of product search and price delivery costs.

- **Revenue model**—how the company plans to make money from its operations. Major e-commerce revenue models include the advertising model, subscription model, transaction fee model, sales model, and affiliate model.

- **Market opportunity**—the revenue potential within a company’s intended market-space.

- **Competitive environment**—the direct and indirect competitors doing business in the same market-space, including how many there are and how profitable they are.

- **Competitive advantage**—the factors that differentiate the business from its competition, enabling it to provide a superior product at a lower cost.

- **Market strategy**—the plan a company develops that outlines how it will enter a market and attract customers.

- **Organizational development**—the process of defining all the functions within a business and the skills necessary to perform each job, as well as the process of recruiting and hiring strong employees.

- **Management team**—the group of individuals retained to guide the company’s growth and expansion.
Describe the major B2C business models.

There are a number of different business models being used in the B2C e-commerce arena. The major models include the following:

- **Portal**—offers powerful search tools plus an integrated package of content and services; typically utilizes a combined subscription/advertising revenue/transaction fee model; may be general or specialized (vortal).
- **E-tailer**—online version of traditional retailer; includes virtual merchants (online retail store only), clicks-and-mortar e-tailers (online distribution channel for a company that also has physical stores); catalog merchants (online version of direct mail catalog); manufacturers selling directly over the Web.
- **Content provider**—information and entertainment companies that provide digital content over the Web; typically utilizes an advertising, subscription, or affiliate referral fee revenue model.
- **Transaction broker**—processes online sales transactions; typically utilizes a transaction fee revenue model.
- **Market creator**—uses Internet technology to create markets that bring buyers and sellers together; typically utilizes a transaction fee revenue model.
- **Service provider**—offers services online.
- **Community provider**—provides an online community of like-minded individuals for networking and information sharing; revenue is generated by referral fees, advertising, and subscriptions.

Describe the major B2B business models.

The major business models used to date in the B2B arena include:

- **E-distributor**—supplies products directly to individual businesses.
- **E-procurement**—single firms create digital markets for thousands of sellers and buyers.
- **Exchanges**—independently owned digital marketplaces for direct inputs, usually for a vertical industry group.
- **Industry consortiums**—industry-owned vertical digital markets.
- **Single-firm networks**—company-owned private industrial networks to coordinate supply chains with a limited set of partners.
- **Industry-wide networks**—industry-owned private industrial networks to set standards, coordinate supply and logistics for an industry.

Recognize business models in other emerging areas of e-commerce.

A variety of business models can be found in the consumer-to-consumer e-commerce, peer-to-peer e-commerce, and m-commerce areas:

- **C2C business models** connect consumers with other consumers. The most successful has been the market creator business model used by eBay.com and Half.com.
P2P business models enable consumers to share files and services via the Web without common servers. A challenge has been finding a revenue model that works. M-commerce business models take traditional e-commerce models and leverage emerging wireless technologies to permit mobile access to the Web. E-commerce enablers’ business models focus on providing the infrastructure necessary for e-commerce companies to exist, grow, and prosper.

Understand key business concepts and strategies applicable to e-commerce.

The Internet and the Web have had a major impact on the business environment in the last decade, and has affected:
• Industry structure—the nature of players in an industry and their relative bargaining power—by changing the basis of competition among rivals, the barriers to entry, the threat of new substitute products, the strength of suppliers, and the bargaining power of buyers.
• Industry value chains—the set of activities performed in an industry by suppliers, manufacturers, transporters, distributors and retailers that transforms raw inputs into final products and services—by reducing the cost of information and other transaction costs.
• Firm value chains—the set of activities performed within an individual firm to create final products from raw inputs—by increasing operational efficiency.
• Business strategy—a set of plans for achieving superior long-term returns on the capital invested in a firm—by offering unique ways to differentiate products, obtain cost advantages, compete globally, or compete in a narrow market or product segment.

Questions

1. What is a business model? How does it differ from a business plan?
2. What are the eight key components of an effective business model?
3. What are Amazon.com’s primary customer value propositions?
4. Describe the five primary revenue models used by e-commerce firms.
5. Why is targeting a market niche generally smarter for a community provider than targeting a large market segment?
6. Besides music, what other forms of information could be shared through peer-to-peer sites such as Kazaa? Are there legitimate commercial uses for P2P commerce?
7. Would you say that Amazon.com and Half.com are direct or indirect competitors? (You may have to visit the Web sites to answer.)
8. What are some of the specific ways that a company can obtain a competitive advantage?
9. Besides advertising and product sampling, what are some other market strategies they might pursue?
10. What elements of FreshDirect’s business model may be faulty? Does this business scale up to a regional or national size?
11. Why is it difficult to categorize e-commerce business models?
12. Besides the examples given in the chapter, what are some other examples of vertical and horizontal portals in existence today?
13. What are the major differences between virtual storefronts, such as marthastewart.com, and clicks-and-bricks operations, such as walmart.com? What are the advantages and disadvantages of each?
14. Besides news and articles, what other forms of information or content do content providers offer?
15. What is a reverse auction? What company is an example of this type of business?
16. What are the key success factors for B2B hubs? How are they different from portals?
17. What is an application service provider?
18. What are some business models seen in the consumer-to-consumer and peer-to-peer e-commerce areas?
19. How have the unique features of e-commerce technology changed industry structure in the travel business?
20. Who are the major players in an industry value chain and how are they impacted by e-commerce technology?
21. What are four generic business strategies for achieving a profitable business?

PROJECTS

1. Select an e-commerce company. Visit its Web site and describe its business model based on the information you find there. Identify its customer value proposition, its revenue model, the marketspace it operates in, who its main competitors are, any comparative advantages you believe the company possesses, and what its market strategy appears to be. Also try to locate information about the company’s management team and organizational structure (check for a page labeled “the Company,” “About Us,” or something similar).

2. Examine the experience of shopping on the Web versus shopping in a traditional environment. Imagine that you have decided to purchase a digital camera (or any other item of your choosing). First, shop for the camera in a traditional manner. Describe how you would do so (for example, how you would gather the necessary information you would need to choose a particular item, what stores you would visit, how long it would take, prices, etc.). Next, shop for the item on the Web. Compare and contrast your experiences. What were the advantages and disadvantages of each? Which did you prefer and why?

3. Visit the eBay.com Web site and look at the many types of auctions available. If you were considering establishing a rival specialized online auction business,
what are the top three market opportunities you would pursue, based on the goods and auction community in evidence at eBay? Prepare a slide presentation to support your analysis and approach.

4. During the E-commerce I era, first mover advantage was touted as one way to success. On the other hand, some suggest that being a market follower can yield rewards as well. Which approach has proven to be more successful—first mover or follower? Choose two e-commerce companies that prove your point, and prepare a brief presentation to explain your analysis and position.

5. Prepare a 3- to 5-page research report on the current and potential future impacts of e-commerce technology on the book publishing industry.

WEB SITE RESOURCES  www.LearnE-commerce.net
- News: Weekly updates on topics relevant to the material in this chapter
- Video lecture: Professor Ken Laudon summarizes the key concepts of the chapter
- Research: Abstracts and links to articles referenced in the chapter, as well as other relevant research
- PowerPoint slides: Illustrations from the chapter and more
- Additional projects and exercises