# Chapter 1 Introduction to E-Commerce

学习指导

当今，电子商务正在以前所未有的力量冲击着人们千百年来形成的商务观念与模式，是企业实现跨越式发展的必然选择。通过本章的学习，读者应该掌握以下内容:

- 什么是电子商务，以及它在成长过程中所经历的二次浪潮。
- 企业在实施电子商务时，为何专注于盈利模式和业务流程的分析，而不是商业模式。
- 经济因素如何产生了培育电子商务第二次浪潮的商业环境?
- 企业如何使用价值链和 SWOT 分析来发现电子商务的机遇。
- 电子商务的国际化性质以及在全球范围内开展电子商务时企业所面临的挑战。
- 掌握有关专用术语及缩略语。

## 1.1 Introduction

Very few people in the United States truly enjoy their hunt for a new or used car. Although many auto dealers have worked to improve their customers' experiences by introducing fixed pricing and "no-haggle" policies, a number of auto dealers continue to use aggressive sales approaches that can leave buyers exhausted, confused, or even worried that they might have been cheated in the transaction. In 1995, Autobytel (Autobytel's URL is http://www.autobytel.com) launched an online car-buying service that promised purchasers a haggle-free experience and offered car dealers a way to increase new vehicle sales volumes and reduce selling costs.

Buying a car with the assistance of Autobytel requires that the buyer register with an Autobytel Website and specify the desired auto in detail, usually after researching the vehicle's options and features on the Internet or by visiting local dealers. More than 95 percent of car buyers today do research on the Internet before buying their cars. Autobytel provides the buyer with a firm price quote for the selected car, then forwards the buyer's contact information to a local participating dealer. Dealers pay Autobytel a subscription fee to receive exclusive rights to referrals from a particular geographic area for the brands of vehicles that they sell. The dealer contacts the buyer, who then completes the purchase transaction at the dealer's location.

The buyer benefits from a speedy, hassle-free, straight forward, and predictable buying process. The dealer benefits by selling more automobiles and not paying a commission to a salesperson. Autobytel receives a monthly subscription fee from each dealer that it has under contract and sells advertising to insurance and finance companies on its Web site. Autobytel currently has contracts

with more than 20,000 auto dealers. Autobytel's revenue from fees paid by auto dealers on these transactions is more than $70 million per year (the company earns another $20 million each year by selling advertising on its Web site and marketing services to car dealers). Internet sales referrals to dealers from Autobytel and companies like it accounted for about 30 percent of all U.S. new vehicle sales in 2007.

Autobytel experienced rapid growth in sales from its inception in 1995 through 2002, when sales growth flattened. Like many other companies launched during the early boom years of electronic commerce, Autobytel had to change its focus. Instead of pursuing a strategy of revenue growth at all costs, it began to examine its costs carefully. The company also took steps to improve the quality of its service by ending relationships with a number of dealers who were generating significant numbers of customer complaints. Since 2004, Autobytel has expanded by buying other companies and offering sales management services and software to auto dealers. Autobytel has emerged from the difficult years of 2001 through 2003 and today is a growing and generally profitable participant in the second wave of electronic commerce that you will learn about in this chapter.

### New Words & Phrases

dealer n. 商人，经销商
exhausted adj. 耗尽的，疲惫的
sales volume 销售量
brand n. 商标
subscription fee 入网费，加盟费
inception n. 开始，开端
electronic commerce 电子商务
boom n. 繁荣
no-haggle 不砍价
transaction n. 交易，事务
exclusive right 专有权，专营权利
benefits from 通过……获益
revenue n. 收入，收益
flatten v. 变平
pursue vt. 追求
emerged from 露出，浮现

### Notes

1. Dealers pay Autobytel a subscription fee to receive exclusive rights to referrals from a particular geographic area for the brands of vehicles that they sell. 译为“经销商付费给 Autobytel 以便获得 Autobytel 只把自己推荐给特定区域顾客的权利。”
2. Internet sales referrals to dealers from Autobytel and companies like it accounted for about 30 percent of all U.S. new vehicle sales in 2007. 译为“Autobytel 公司和类似于 Autobytel 的公司在网上的汽车销量已占全美新车销量的 30%。”

## 1.2 Electronic Commerce: The Second Wave

The business phenomenon that we now call electronic commerce has had an interesting history. From humble beginnings in the mid-1990s, electronic commerce grew rapidly until 2000, when a major downturn occurred. Many people have seen news stories about the “dot-com boom” followed

by the "dot-com bust" or the "dot-bomb". In the period from 2000 to 2003, many industry observers were writing obituaries for electronic commerce. Just as the unreasonable expectations for immediate success fueled the high expectations during the boom years, overly gloomy news reports colored perceptions during this time. Beginning in 2003, with the general economy still in the doldrums, electronic commerce began to show signs of new life. Companies that had survived the downturn were not only seeing growth in sales again, but many of them were showing profits. Although the rapid expansion and high levels of investment of the boom years are not likely to be repeated, the second wave of electronic commerce is well under way. This section defines electronic commerce and describes how it is growing once again in its second wave.

### 1.2.1 Electronic Commerce and Electronic Business

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

### 1.2.2 Categories of Electronic Commerce

Some people find it useful to categorize electronic commerce by the types of entities participating in the transactions or business processes. The five general electronic commerce categories are **business-to-consumer**, **business-to-business**, **business processes, consumer-to-consumer**, and **business-to-government**. The three categories that are most commonly used are:

• Consumer shopping on the Web, often called business-to-consumer (or **B2C**).

• Transactions conducted between businesses on the Web, often called business-to-business (or B2B).

• Transactions and business processes in which companies, governments, and other organizations use Internet technologies to support selling and purchasing activities.

Some researchers define a fourth category of electronic commerce, called **consumer-to-consumer** (or **C2C**), which includes individuals who buy and sell items among themselves. For example, C2C electronic commerce occurs when a person sells an item through a Web auction site to

another person. In some books, C2C sales are included in the B2C category because the person selling the item acts much as a business would for purposes of the transaction.

Finally, some researchers also define a category of electronic commerce called **business-to-government** (or **B2G**); this category includes business transactions with government agencies, such as paying taxes and filing required reports. An increasing number of states have Web sites that help companies do business with state government agencies. For example, the CA.gov Procurement site makes it easy for businesses to conduct online transactions with the state of California. In some books, B2G transactions are included in our discussions of B2B electronic commerce. Table 1-1 summarizes these five categories of electronic commerce.

Table 1-1 Electronic commerce categories

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

### 1.2.3 The Second Wave of Electronic Commerce

Economists Chris Freeman and Francisco Louçã describe four waves that occurred in the Industrial Revolution in their book *As Time Goes By*. Many researchers predict that electronic commerce and the information revolution brought about by the Internet will go through similar waves. Those researchers agree that the second wave of electronic commerce has begun. This section outlines the defining characteristics of the first wave of electronic commerce and describes how the second wave is different.

The first wave of electronic commerce was predominantly a U.S. phenomenon. Web pages were primarily in English, particularly on commerce sites. The second wave is characterized by its international scope, with sellers doing business in many countries and in many languages. Language

translation and currency conversion are two impediments to the efficient conduct of global business in the second wave.

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

The Internet technologies used in the first wave, especially in B2C commerce, were slow and inexpensive. Most consumers connected the Internet using dial-up modems. The increase in broadband connections in homes is a key element in the B2C component of the second wave. In 2004, the number of U.S. homes with broadband connections began to increase rapidly. Most industry estimates showed that about 12 percent of U.S. homes had broadband connections in early 2004. By late 2007, those estimates were ranging between 40 and 50 percent. Other countries, such as South Korea, subsidize their citizens' Internet access and have an even higher rate of broadband usage. Although these connections are more expensive, they are more than 10 times faster than dial-up. This increased speed not only makes Internet use more efficient, it can alter the way people use the Web. For example, a broadband connection allows a user to watch movies and television programs online—something that is impossible to do with a dial-up connection.

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

The use of electronic mail (or e-mail) in the first wave was as a tool for relatively unstructured communication. In the second wave, sellers are using e-mail as an integral part of their marketing and customer contact strategies.

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

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

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

## New Words & Phrases

phenomenon n. 现象
downturn n. （价格或活动）开始下降
bomb v. 轰炸，失败
gloomy adj. 黑暗的，令人沮丧的
in the doldrums 意气消沉，无精打彩
transformation n. 转型，转变
wireless transmissions 无线传输
characteristics n. 特性，特征
currency conversion 外汇汇兑
start-up n. 启动
overemphasis n. 过分的强调
underlying adj. 根本的，潜在的
be integrated into 统一到……中
assembly n. 装配，组装
patchwork n. 拼凑物
fingerprint reader 指纹读取器
dip n. 凹陷处
devise vt. 想出；计划；设计；发明
music recording industry 唱片业
intellectual property 知识产权
thrive vi. 兴盛，兴隆
humble adj. 谦逊的，卑微的
bust v. 打破，打碎
obituary n. 讣告，讣闻
perception n. 感知，观念
under way 已经开始并进行着
interchangeably adv. 可交地，可替交地
business processes 业务流程
predominantly adv. 主要地，显著地，突出地
impediment n. 妨碍、阻碍某事物进展的人或物
capital n. 资金，资本
exploit vt. 开发，开采
subsidize vt. 给……津贴或补贴，资助或补助……
bar codes n. 条形码
inventory n. 详细目录，存货清单
biometric technology 生物技术，生物辨识技术
retina n. 视网膜
renewed adj. 复兴的，重申的
fraught adj. 充满着不愉快的事情的
piracy n. 盗版，非法翻印
rampant adj. 猖獗的
innovative adj. 新发明的，新引进的，革新的

## Abbreviations

e-commerce(electronic commerce) 电子商务
PDA (personal digital assistants) 掌上电脑

B2C(business-to-consumer) 企业与消费者间电子商务
B2B(business-to-business) 企业间电子商务
C2C(consumer-to-consumer) 消费者间的电子商务
B2G(business-to-government) 企业与政府间的电子商务
EDI(Electronic Data Interchange) 电子数据交换，无纸贸易
RFID(Radio Frequency Identification) 射频识别
e-mail(electronic mail) 电子邮件

Notes

1. Just as the unreasonable expectations for immediate success fueled the high expectations during the boom years, overly gloomy news reports colored perceptions during this time. “就好像在泡沫年代突然地成功激起了不切实际的期望一样，此时媒体报道的色彩又过分灰暗。”
2. An increasing number of states have Web sites that help companies do business with state government agencies.本句中的 that 引导定语从句，用来修饰 Web sites。译为“美国有越来越多的州建立了网站来帮助企业和政府机构进行交易。”
3. This created an environment in which digital piracy—the theft of musical artists’ intellectual property—became rampant. 本句中“the theft of musical artists’ intellectual property”是对“digital piracy”的进一步说明。译为“这就产生了数字盗版——侵犯音乐家知识产权——十分猖獗的环境。”

## 1.3 Business Models, Revenue Models, and Business Processes

A business model is a set of processes that combine to achieve a company’s goal, which is to yield a profit. In the first wave of electronic commerce, many investors sought out start-up companies with appealing business models. A good business model was expected to lead to rapid sales growth and market dominance. The idea that the key to success was simply to copy the business model of a successful dot-com business led the way to many business failures, some of them quite dramatic.

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

Companies and investors do still use the idea of a revenue model, which is a specific collection of business processes used to identify customers, market to those customers, and generate sales to those customers. The revenue model idea is helpful for classifying revenue- generating activities for communication and analysis purposes.

### 1.3.1 Focus on Specific Business Processes

In addition to the revenue model grouping of business processes, companies think of the rest of their operations as specific business processes. Those processes include purchasing raw materials or

goods for resale, converting materials and labor into finished goods, managing transportation and logistics, hiring and training employees, managing the finances of the business, and many other activities.

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

### 1.3.2 Product/Process Suitability to Electronic Commerce

One business process that is especially well suited to electronic commerce is the selling of commodity items. A commodity item is a product or service that is hard to distinguish from the same products or services provided by other sellers; its features have become standardized and well known. Gasoline, office supplies, soap, computers, and airline transportation are all examples of commodity products or services, as are the books and CDs sold by Amazon.com.

Another key factor that can make an item well suited to electronic commerce is the product's shipping profile. A product's shipping profile is the collection of attributes that affect how easily that product can be packaged and delivered. A high value-to-weight ratio can help by making the overall shipping cost a small fraction of the selling price. An airline ticket is an excellent example of an item that has a high value-to-weight ratio. Products that are consistent in size, shape, and weight can make warehousing and shipping much simpler and less costly. The shipping profile is only one factor, however. Expensive jewelry has a high value-to-weight ratio, but many people are reluctant to buy it without examining it in person unless the jewelry is sold under a well-known brand name and with a generous return policy.

A combination of electronic and traditional commerce strategies works best when the business process includes both commodity and personal inspection elements.

#### New Words & Phrases

business model 商业模型
dominance n. 优势；支配地位；控制力
streamline vt. 简化使效率更高
logistics n. 物流
antique n. 古董
yield v. 生产，出产，带来
dramatic adj. 戏剧性的
revenue model 盈利模式
tactile adj. 触觉的，触觉感知的
profile n. 轮廓，外形

#### Notes

1. The idea that the key to success was simply to copy the business model of a successful dot-com business led

the way to many business failures, some of them quite dramatic. 句子的主干是“The idea……led the way to……”，句中的“that”引导定语从句，修饰“idea”。本句译为“认为成功的关键就是简单地模仿成功的.com 公司的想法导致了许多企业的失败，其中有些公司十分具有戏剧性。”

2. Companies and investors do still use the idea of a revenue model, which is a specific collection of business processes used to identify customers, market to those customers, and generate sales to those customers.句中的“do”起强调作用，“which”引导非限定性定语从句，用来修饰“revenue model”。本句译为“企业和投资者当前依然在使用盈利模式的思想，即用于识别客户、向其推销并从中获取收益的业务流程的集合。”
3. A commodity item is a product or service that is hard to distinguish from the same products or services provided by other sellers. 句中“that”引导定语从句，用来修饰“a product or service”，“provided by other sellers”是过去分词做定语，修饰“products or services”。本句译为“这里的商品是指不同商家提供的同类产品或服务很难加以区分。”

## 1.4 Economic Forces and Electronic Commerce

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

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

### 1.4.1 Transaction Costs

Transaction costs are the total of all costs that a buyer and seller incur as they gather information and negotiate a purchase-and-sale transaction. Although brokerage fees and sales commissions can be a part of transaction costs, the cost of information search and acquisition is

often far larger. Another significant component of transaction costs can be the investment a seller makes in equipment or in the hiring of skilled employees to supply the product or service to the buyer.

### 1.4.2 Markets and Hierarchies

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

The practice of an existing firm replacing one or more of its supplier markets with its own hierarchical structure for creating the supplied product is called **vertical integration**.

### 1.4.3 Using Electronic Commerce to Reduce Transaction Costs

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

To see how electronic commerce can change the level and nature of transaction costs, consider an employment transaction. The agreement to employ a person has high transaction costs for the seller—the employee who sells his or her services. These transaction costs include a commitment to forego other employment and career development opportunities. Individuals make a high investment in learning and adapting to the culture of their employers. If accepting the job involves a move, the employee can incur very high costs, including actual costs of the move and related costs, such as the loss of a spouse's job. Much of the employee's investment is specific to a particular job and location; the employee cannot transfer the investment to a new job.

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

### 1.4.4 Network Effects

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

### 1.4.5 Using Electronic Commerce to Create Network Effects

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

New Words & Phrases

scarce adj. 缺乏的，罕见的
firm n. 公司
motivation n. 动机，诱因
brokerage n. 经纪业，佣金，经纪费
forego vt. 走在…之前，居先
uprooting n. 倒根，挖除伐根
diminishing returns 收益递减
barter n. 物物交换，易货
mechanism n. 机制
incur vt. 遭受；招致，引起
coordination n. 协调，和谐
telecommute vi. 远程办公
network effect 网络效应

Notes

1. The practice of an existing firm replacing one or more of its supplier markets with its own hierarchical structure for creating the supplied product is called vertical integration. 译为“现有的公司建立等级制的结构来生产自己所需要的产品以代替供应商市场的做法称为垂直一体化。”

## 1.5 Identifying Electronic Commerce Opportunities

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

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

### 1.5.1 Strategic Business Unit Value Chains

In his 1985 book, *Competitive Advantage*, Michael Porter introduced the idea of **value chains**. A value chain is a way of organizing the activities that each strategic business unit undertakes to

design, produce, promote, market, deliver, and support the products or services it sells. In addition to these **primary activities**, Porter also includes **supporting activities**, such as human resource management and purchasing, in the value chain model.

### 1.5.2 Industry Value Chains

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

As they examine their industry value chains, many managers are finding that they can use electronic commerce and Internet technologies to reduce costs, improve product quality, reach new customers or suppliers, and create new ways of selling existing products. For example, a software developer who releases annual updates to programs might consider removing the software retailer from the distribution channel for software updates by offering to send the updates through the Internet directly to the consumer. This change would modify the software developer's industry value chain and would provide an opportunity for increasing sales revenue (the software developer could retain the margin a retailer would have added to the price of the update), but it would not appear as part of the software developer business unit value chain. By examining elements of the value chain outside the individual business unit, managers can identify many business opportunities, including those that can be exploited using electronic commerce.

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

### 1.5.3 SWOT Analysis: Evaluating Business Unit Opportunities

Now that you have learned how to identify industry value chains and break each value chain down into strategic business units, you can learn one popular technique for analyzing and evaluating business opportunities. Most electronic commerce initiatives add value by either reducing transaction costs, creating some type of network effect, or a combination of both. In SWOT analysis (the acronym is short for strengths, weaknesses, opportunities, and threats), the analyst first looks into the business unit to identify its strengths and weaknesses. The analyst then reviews the environment in which the business unit operates and identifies opportunities presented by that environment and the threats posed by that environment. Figure1-1 shows questions that an analyst

would ask in conducting a SWOT analysis.

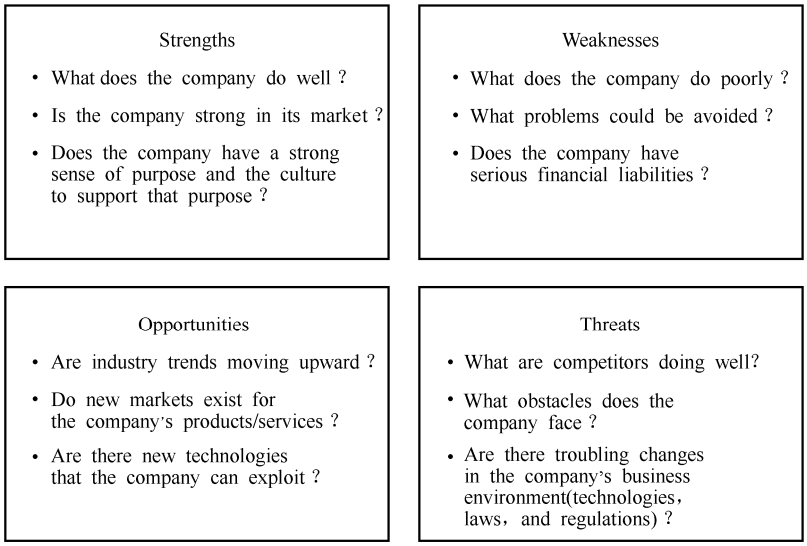


Figure 1-1 SWOT analysis questions

By considering all of the issues that it faces in a systematic way, a business unit can formulate strategies to take advantage of its opportunities by building on its strengths, avoiding any threats, and compensating for its weaknesses. In the mid-1990s, Dell Computer used a SWOT analysis to create a business strategy that helped it become a strong competitor in its industry value chain. Dell identified its strengths in selling directly to customers and in designing its computers and other products to reduce manufacturing costs. It acknowledged the weakness of having no relationships with local computer dealers. Dell faced threats from competitors such as Compaq (now a part of Hewlett-Packard) and IBM, both of which had much stronger brand names and reputations for quality at that time. Dell identified an opportunity by noting that its customers were becoming more knowledgeable about computers and could specify exactly what they wanted without having Dell salespeople answer questions or develop configurations for them. It also saw the Internet as a potential marketing tool. The results of Dell's SWOT analysis appear in Figure 1-2.

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

## New Words & Phrases

shareholder n. 股东
industry n. 行业
value chains 价值链
primary activities 基本活动

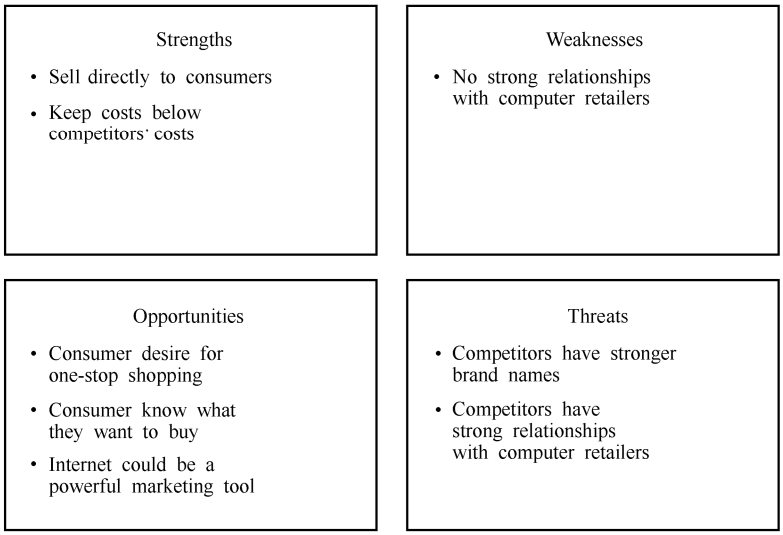


Figure 1-2　Results of Dell's SWOT analysis

supporting activities 辅助活动
life cycle 生命周期
capitalized on 充分利用某事物
consultants　n. 顾问
formulate　vt. 构想出，规划

**Abbreviations**

SWOT(strengths, weaknesses, opportunities, and threats)　态势分析法（优势、劣势、机会、威胁）

**Notes**

1. A value chain is a way of organizing the activities that each strategic business unit undertakes to design, produce, promote, market, deliver, and support the products or services it sells.句中“it sells”为定语从句，此处省略了“which”。本句译为“价值链是一种组织活动的方法，这些活动是策略性业务单位承担他所销售的产品或服务的设计、生产、促销、销售、运输和售后服务的活动。”
2. Porter uses the term value system to describe the larger stream of activities into which a particular business unit's value chain is embedded. 译为“波特使用术语价值系统来描述某个业务单位的价值链所嵌入的更大的业务活动流。”
3. For example, a software developer who releases annual updates to programs might consider removing the software retailer from the distribution channel for software updates by offering to send the updates through the Internet directly to the consumer. 句子的主干为“a software developer…might consider…”，“who”引导定语从句，修饰“developer”。本句译为“例如，每年都升级程序的软件开发商可能会考虑从分销渠道中去除软件零售商，转向通过互联网直接向用户提供软件升级。”

## 1.6　International Nature of Electronic Commerce

Because the Internet connects computers all over the world, any business that engages in

electronic commerce instantly becomes an international business. When companies use the Web to improve a business process, they are automatically operating in a global environment. The key issues that any company faces when it conducts international commerce include trust and culture, language, and infrastructure. The related issues of international law and currency are covered in subsequent chapters.

### 1.6.1 Trust Issues on the Web

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

Customers' inherent lack of trust in "strangers" on the Web is logical and to be expected; after all, people have been doing business with their neighbors—not strangers—for thousands of years. When a company grows to become a large corporation with multinational operations, its reputation grows commensurately. Before a company can do business in dozens of countries, it must prove its trustworthiness by satisfying customers for many years as it grows. Businesses on the Web must find ways to overcome this well-founded tradition of distrusting strangers, because today a company can incorporate one day and, through the Web, be doing business the next day with people all over the world. For businesses to succeed on the Web, they must find ways to quickly generate the trust that traditional businesses take years to develop.

### 1.6.2 Language Issues

Most companies realize that the only way to do business effectively in other cultures is to adapt to those cultures. The phrase "think globally, act locally" is often used to describe this approach. The first step that a Web business usually takes to reach potential customers in other countries, and thus in other cultures, is to provide local language versions of its Web site. This may mean translating the Web site into another language or regional dialect. Researchers have found that customers are far more likely to buy products and services from Web sites in their own language, even if they can read English well. Only about 400 million of the world's 6 billion people learned English as their native language.

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

### 1.6.3 Cultural Issues

An important element of business trust is anticipating how the other party to a transaction will

act in specific circumstances. A company's brand conveys expectations about how the company will behave, therefore companies with established brands can build online businesses more quickly and easily than a new company without a reputation. For example, a potential buyer might like to know how the seller would react to a claim by the buyer that the seller misrepresented the quality of the goods sold. Part of this knowledge derives from the buyer and seller sharing a common language and common customs. Business partners ideally have a common legal structure for resolving disputes. The combination of language and customs is often called culture. Most researchers agree that culture varies across national boundaries and, in many cases, varies across regions within nations. All companies must be aware of the differences in language and customs that make up the culture of any region in which they intend to do business.

Some errors stemming from subtle language and cultural standards have become classic examples that are regularly cited in international business courses and training sessions. For example, General Motors' choice of name for its Chevrolet Nova automobile amused people in Latin America—no va means "it will not go" in Spanish. Pepsi's "Come Alive" advertising campaign fizzled in China because its message came across as "Pepsi brings your ancestors back from their graves."

### 1.6.4 Culture and Government

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

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

### 1.6.5 Infrastructure Issues

Businesses that successfully meet the challenges posed by trust, language, and culture issues still face the challenges posed by variations and inadequacies in the infrastructure that supports the

Internet throughout the world. Internet infrastructure includes the computers and software connected to the Internet and the communications networks over which the message packets travel. In many countries other than the United States, the telecommunication industry is either government owned or heavily regulated by the government. In many cases, regulations in these countries have inhibited the development of the telecommunication infrastructure or limited the expansion of that infrastructure to a size that cannot reliably support Internet data packet traffic.

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

Until the late 1990s, most Europeans paid for the amount of time they used the telephone line, including time for local calls. In the United States, telecommunication companies have long sold local telephone service as a flat-rate access system, in which the consumer or business pays one monthly fee for unlimited telephone line usage. Activists in European countries argued that flat-rate access was a key to the success of electronic commerce in the United States. Although many factors contributed to the rapid rise of U.S. electronic commerce, many industry analysts agree that flat-rate access was one of the most important. As more European telecommunication providers began to offer flat-rate access, electronic commerce in those countries increased dramatically.

## New Words & Phrases

anonymity n. 匿名，作者不明（或不详）
commensurate adj. 相称的，相当的
dispute n. 辩论，争端，争执
unfettered adj. 无拘无束的
flat-rate access 固定费率访问
multinational adj. 多国的，跨国的
anticipate vt. 预感，期望
stem from 来自，起源于，由…造成
at odds with 与…不和，与…争吵

## Notes

1. For businesses to succeed on the Web, they must find ways to quickly generate the trust that traditional businesses take years to develop. 句中“that”引导定语从句，修饰“trust”。本句译为“为了在网络上成功，企业必须想办法快速获取传统企业花费多年才能建立起来的信任。”
2. A company’s brand conveys expectations about how the company will behave, therefore companies with established brands can build online businesses more quickly and easily than a new company without a reputation. 译为“品牌传达了对公司行为的期望，因而有知名度品牌的公司比无名的新公司可以更快、更容易地在网上开展业务。”

# Reading Material——Benefits of EC

## Benefits to Organizations

EC's benefits to organizations are as follows.

**Global Reach.** EC expands the marketplace to national and international markets. With minimal capital outlay, a company can easily and quickly locate the best suppliers, more customers, and the most suitable business partners worldwide. Expanding the base of customers and suppliers enables organizations to buy cheaper and sell more.

**Cost Reduction.** EC decreases the cost of creating, processing, distributing, storing, and retrieving paper-based information. High printing and mailing costs are lowered or eliminated.

**Supply Chain Improvements.** Supply chain inefficiencies, such as excessive inventories and delivery delays, can be minimized with EC. For example, by building autos to order instead of for dealers' showrooms, the automotive industry is expecting to save tens of billions of dollars annually just from inventory reduction.

**Extended Hours: 24/7/365.** The business is always open on the Web, with no overtime or other extra costs.

**Customization.** Pull-type production (build-to-order) allows for inexpensive customization of products and services and provides a competitive advantage for companies that implement this strategy.

**New Business Models.** EC allows for many innovative business models that provide strategic advantages and/or increase profits. Combining group purchasing with reverse auctions is one example of an innovative business model.

**Vendors' Specialization.** EC allows for a high degree of specialization that is not economically feasible in the physical world. For example, a store that sells only dog toys (*dogtoys.com*) can operate in cyberspace, but in the physical world such a store would not have enough customers.

**Rapid Time-to-Market.** EC reduces the time between the inception of an idea and its commercialization due to improved communication and collaboration.

**Lower Communication Costs.** EC lowers telecommunication costs—the Internet is much cheaper than VANs.

**Efficient Procurement.** EC enables efficient e-procurement that can reduce administrative costs by 80 percent or more, reduce purchase prices by 5 to 15 percent, and reduce cycle time by more than 50 percent.

**Improved Customer Relations.** EC enables companies to interact more closely with customers, even if through intermediaries. This allows for personalization of communication, products, and services, which promotes better CRM and increases customer loyalty.

**Up-to-Date Company Material.** Any material on the Web, such as prices in catalogs, can be correct up to the minute. Company information can always be current.

**No City Business Permits and Fees.** Online companies that are not registered businesses with employees do not need any permits to operate nor do they pay license fees. If the business is registered, city fees and licenses apply.

**Other Benefits.** Other benefits include improved corporate image, improved customer service, ease in finding new business partners, simplified processes, increased productivity, reduced paperwork, increased access to information, reduced transportation costs, and increased operation and trading flexibility.

## Benefits to Individuals (Consumers)

The benefits of EC to individuals are as follows.

**Ubiquity.** EC allows consumers to shop or perform other transactions year-round, 24 hours a day, from almost any location.

**More Products and Services.** EC provides consumers with more choices; they can select from many vendors and from more products.

**Customized Products and Services.** Dell customizes computers and sells them at competitive prices. Customers can get an increased number of products (from shoes to dolls to cars) and services just the way they want them.

**Cheaper Products and Services.** EC frequently provides consumers with less-expensive products and services by allowing them to shop in many places and conduct quick comparisons.

**Instant Delivery.** In the cases of digitized products, EC allows for almost instant delivery.

**Information Availability.** Consumers can locate relevant and detailed product information in seconds, rather than days or weeks. Also, multimedia support is cheaper and better.

**Participation in Auctions.** EC makes it possible for consumers to participate in virtual auctions. These allow sellers to sell things quickly and buyers can locate collectors' items and bargains.

**Electronic Communities.** EC allows customers to interact with other customers in electronic communities and exchange ideas as well as compare experiences.

**No Sales Tax.** In many countries, online business is exempt from sales taxes.

## Benefits to Society

The benefits of EC to society are as follows.

**Telecommuting.** More individuals can work at home and do less traveling for work or shopping, resulting in less traffic on the roads and reduced air pollution.

**Higher Standard of Living.** Some merchandise can be sold at lower prices, allowing less-affluent people to buy more and increase their standard of living.

**Homeland Security.** EC technologies facilitate homeland security by improving communication, coordination, information interpretation, and so on.

**Hope for the Poor.** Because of EC, people in Third World countries and rural areas are now able to enjoy products and services that were unavailable in the past. These include opportunities to learn a skilled profession or earn a college degree.

**Availability of Public Services.** Public services, such as health care, education, and distribution of government social services, can be done at a reduced cost and/or improved quality. For example, EC provides rural doctors and nurses access to information and technologies with which they can better treat their patients.

### New Words & Phrases

outlay n. 支出；费用

ubiquity n. 到处存在，（同时的）普遍存在

# 科技英语的特点

比起非科技英语来，科技英语有四多，即复杂长句多、被动语态多、非谓语动词多、词性转换多。

## 一、复杂长句多

科技文章要求叙述准确，推理谨严，因此一句话里包含三四个甚至五六个分句的，并非少见。译成汉语时，必须按照汉语习惯破成适当数目的分句，才能条理清楚，避免洋腔洋调。这种复杂长句居科技英语难点之首，读者要学会运用语法分析方法来加以解剖，以便以短代长，化难为易。例如：

Factories will not buy machines unless they believe that the machine will produce goods that they are able to sell to consumers at a price that will cover all cost.

这是由一个主句和四个从句组成的复杂长句，只有进行必要的语法分析，才能正确理解和翻译。现试译如下：

除非相信那些机器造出的产品卖给消费者的价格足够支付所有成本，否则厂家是不会买那些机器的。

也可节译如下：

要不相信那些机器造出的产品售价够本，厂家是不会买的。

后一句只用了 24 个字，比前句 40 个字节约用字 40%，而对原句的基本内容无损。可见，只要吃透原文的结构和内涵，翻译时再在汉语上反复推敲提炼，复杂的英语长句，也是容易驾驭的。又如：

There is an increasing belief in the idea that the “problem solving attitude” of the engineer must be buttressed not only by technical knowledge and “scientific analysis” but that the engineer must also be aware of economics and psychology and, perhaps even more important, that he must understand the world around him.

这个长句由一个主句带三个并列定语从句构成，试译如下：

越来越令人信服的想法是：工程师不仅必须用技术知识和科学分析来加强解决问题的意向，而且也一定要了解经济学和心理学，而可能更为重要的是：必须懂得周围世界。

这两个例句初步说明了英语复杂长句的结构和译法。

## 二、被动语态多

英语使用被动语态大大多于汉语，如莎士比亚传世名剧《罗密欧与朱丽叶》中的一句就两次用了被动语态：

Juliet was torn between desire to keep Romeo near her and fear for his life, should his presence be detected.

朱丽叶精神上受到折磨，既渴望和罗密欧形影不离，又担心罗密欧万一让人发现，难免有性命之忧。

科技英语更是如此，有三分之一以上用被动语态。例如：

(a) No work can be done without energy.

译文：没有能量决不能做功。

(b) All business decisions must now be made in the light of the market.

译文：所有企业现在必须根据市场来作出决策。

(c) Automobiles may be manufactured with computer-driven robots or put together almost totally by hand.

译文：汽车可以由计算机操纵的机器人来制造，或者几乎全部用手工装配。

以上三例都用被动语态。但译成汉语时都没有用被动语态，以便合乎汉语传统规范。例(c)的并列后句，其谓语本应是 may be put together。put 是三种变化形式一样的不规则动词，在这里是过去分词，由于修辞学

上避免用词重复出现的要求，略去了 may be 两词，所以并非现在时，而是被动语态。

科技英语之所以多用被动语态，为的是要强调所论述的客观事物（四例中的 work, necessaries, business decisions, automobiles），因此放在句首，作为句子的主语，以突出其重要性。

## 三、非谓语动词多

英语每个简单句中，只能用一个谓语动词，如果读到几个动作，就必须选出主要动作当谓语，而将其余动作用非谓语动词形式，才能符合英语语法要求。

非谓语动词有三种：动名词、分词（包括现在分词和过去分词）和不定式。例如：

(a) 要成为一个名符其实的内行，需要学到老。

这句中，有“成为”、“需要”和“学”三个表示动作的词，译成英语后为：

To be a true professional requires lifelong learning.

可以看出，选好“需要”（require）作为谓语，其余两个动作：“成为”用不定式形式 to be，而“学”用动名词形式 learning，这样才能符合英语语法要求。

(b) 任何具有重量并占有空间的东西都是物质。

这句包含“是”（在英语中属于存在动词）、“具有”和“占有”三个动作，译成英语为：

Matter is anything having weight and occupying space.

将“是”（is）当谓语（系动词），而“具有”（having）和“占有”（occupying）处理为现在分词，连同它们的宾语 weight 和 space 分别构成现在分词短语作为修饰名词 anything 的定语。

(c) 这门学科为人所知的两大分支是无机化学和有机化学。

这句有“为人所知”和“是”两个动词，译成英语后为：

The tow great divisions of this science known are inorganic chemistry and organic chemistry.

这里将“是”(are) 作为谓语系动词，而将“为人所知”(known) 处理为过去分词。

上述三例分别列举了三种非谓语动词的使用情况。其必要性都是为了英语语法上这条铁定的要求：每个简单句只允许有一个谓语动词。这就是英语为什么不同于其它语言，有非谓语动词，而且用得十分频繁的原因。

## 四、词性转换多

英语单词有不少是多性词，即既是名词，又可用作动词、形容词、介词或副词，字形无殊，功能各异，含义也各不相同，如不仔细观察，必致谬误。例如：

(a) above

介词：above all (things) 首先，最重要的是　　形容词：for the above reason 由于上述理由

副词：As (has been) indicated above 如上所指出

(b) light

名词：（启发）in (the)light of 由于，根据；（光）high light(s) 强光，精华；（灯）safety light 安全指示灯

形容词：（轻)light industry 轻工业；（明亮）light room 明亮的房间；（淡）light blue 淡蓝色；（薄）light coating 薄涂层

动词：　（点燃）light up the lamp 点灯

副词：　（轻快）travel light 轻装旅行　　（容易）light come, light go 来得容易去得快

诸如此类的词性转换，在德、俄等西方语言中是少有的，而科技英语中却屡见不鲜，几乎每个技术名词都可转换为同义的形容词。词性转换增加了英语的灵活性和表现力，读者必须从上下文判明用词在句中是何

种词性，而且含义如何，才能对全句得到正确无误的理解。

我们在科技翻译实践中，要充分体现以上各个特点，重视信息传递，注意调整句式、篇章，以使译文叙述条理、逻辑连贯，同时还要注意准确使用科技术语。

# Exercises

## I. Answer the following questions

1. List the five general electronic commerce categories.
2. What's a business model? Was the key to success simply to copy the business model of a successful dot-com business?
3. What's a revenue model?
4. List some products suitability to Electronic Commerce.
5. What are transaction costs?
6. What's a network effect?
7. Relate the key issues that any company faces when it conducts international commerce.
8. Explain the difference between language translation and language localization.

## II. Fill in the blanks in each of the following

1. The term electronic commerce (or e-commerce) is used in its broadest sense and includes all business activities that use _____ technologies.
2. Companies that operate only online are often called _____ or _____ businesses to distinguish them from companies that operate in physical locations (solely or together with online operations).
3. The second wave is characterized by its _____ scope, with sellers doing business in many countries and in many languages.
4. A _____ item is a product or service that is hard to distinguish from the same products or services provided by other sellers; its features have become standardized and well known.
5. A combination of _____ and _____ commerce strategies works best when the business process includes both commodity and personal inspection elements.
6. The practice of an existing firm replacing one or more of its supplier markets with its own hierarchical structure for creating the supplied product is called_____.
7. Businesses and individuals can use electronic commerce to reduce transaction costs by improving the flow of _____ and increasing the _____ of actions.
8. A _____ is a way of organizing the activities that each strategic business unit undertakes to design, produce, promote, market, deliver, and support the products or services it sells.

## III. Questions and Discussion

1. Can you give more benefits of EC? If yes, please list them.
2. Discuss what changes EC makes in your life.