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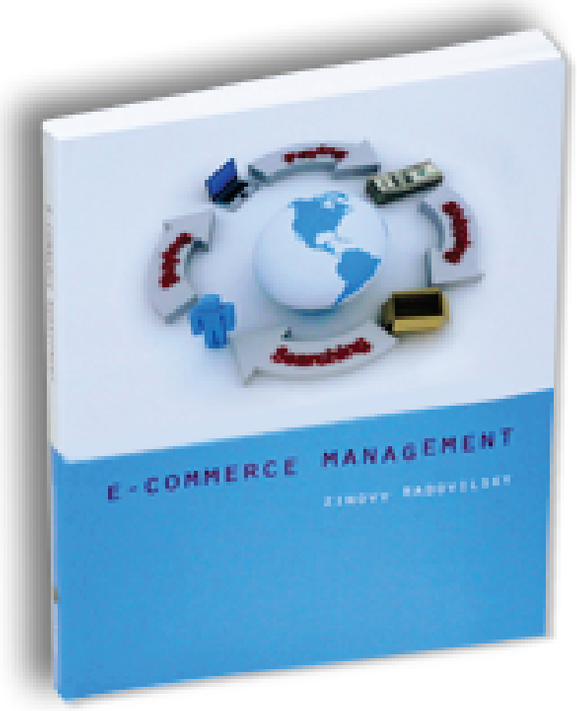

E-Commerce Management

By Zinovy Radovilsky

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- Excerpt of Chapter 1

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E-COMMERCE MANAGEMENT

ZINOVY RADOVILSKY
California State University, East Bay

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INTRODUCTION TO E-COMMERCE

1.1 THE INTERNET ERA

In 2005, the CNN channel conducted a survey of the most important global innovations in the past quarter century. What do you think was the top-rated innovation? What would you rate as innovation #1? You are correct—the ***Internet*** was voted as the most important innovation in the past quarter century along with other important inventions like the cell phone, the personal computer, fiber optics, e-mail, and others [1].

The Internet's infrastructure is networked computing that connects computers and other electronic devices by telecommunication networks. In the recent years, the Internet has become a global phenomenon that has profoundly changed the nature of communication between people and businesses. It has also become a major distribution channel, where transactions to purchase goods and services are made. The Internet has profoundly changed economics, markets, and even industry structures in many countries [2].

The ***World Wide Web***, commonly abbreviated as ***WWW*** or the ***Web,*** is one of the main ways of accessing and utilizing information over the Internet. It is an information-sharing model that is built on top of the Internet [3]. The Web employs the Hyper-Text Transmission Protocol (HTTP), the main tools used in the Internet, to transmit Internet-based documents (data). It also uses browsers like Internet Explorer and Firefox to access and view documents called web pages (web sites) that are linked to each other via hyperlinks. Web documents also contain graphics, sounds, text, and video. The Internet, not the Web, is also used for e-mail, instant messaging, and file transferring (using file transfer protocol or FTP) [3].

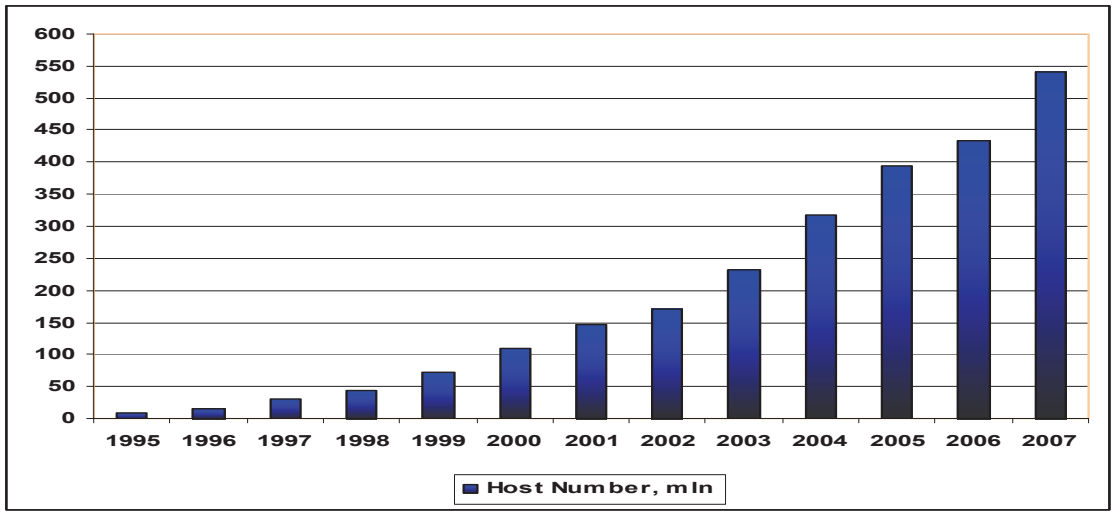
The growth of Internet-related activities has been tremendous from the last decade of the 20th century to the modern time (see Figure 1-1) [4]. The number of Internet domain hosts (companies and consumers that have their own web pages and provide web site service to others) has grown, at an accelerated rate, from less than 10 million hosts in 1995 to near 550 million hosts in 2007 [3]. This number will certainly continue to grow in the future.

What drives people and organizations to increase their utilization of the Internet and World Wide Web? Why is it so popular today? The answers to these questions can be quite clear if we consider the Internet as an incredible medium that provides:

- Rich sources of information and news for different subjects that may not be available in other media.
- Quick access to this information and news at any time and at any place in the world, provided Internet access may be established.
- Easy search, selection, and retrieval of information and news.
- Easy communication and information sharing.
- Extensive business opportunities in terms of selling, buying, transacting, and communicating on the Internet.

The last point is in the core of developing commercial solutions on the Internet called "e-commerce."

Figure 1-1: Internet Hosts' Growth



1.2 E-COMMERCE AND E-BUSINESS DEFINITIONS

E-commerce has become a significant element in the modern global economic environment. "E-commerce" is defined as the use of a computer network, primarily the Internet, to buy and sell products, services, information, and communication. However, e-commerce may also be considered as an application of technology using the Internet. It may also represent another aspect of being a tool for increasing efficiency and lowering costs in organizations. The three definitions of e-commerce are summarized in Table 1-1.

Table 1-1: Definitions of E-commerce

E-COMMERCE ASPECTS	*E-COMMERCE DEFINITIONS*
Technology	E-commerce is the ***application of technology*** used to automate and improve business transactions utilizing predominantly Internet-based web sites.
Business	E-commerce is used to provide the ***capability of buying and selling*** products, services, and information on predominantly Internet-based web sites.
Value	E-commerce is a ***tool*** that may be used by business customers and consumers to create value in the Internet-based transactions by increasing efficiency and cutting costs while improving the quality of goods and services.

All aspects of e-commerce are important and deserve in-depth explanation. In this chapter and other chapters of this book, we will concentrate on the business side of e-commerce, considering e-commerce as a business phenomenon (second definition), and as a tool that adds value to business and customers (third definition).

As we mentioned before, e-commerce communication and transactions are predominantly done through Internet-based web sites. These online web sites may be used to sell products through electronic storefronts, provide customer service, disseminate information, provide business intelligence (for example, create recommendations of what products to purchase), and many other possible value-added offerings or activities (see Figure 1-2). Sometimes, the e-commerce web sites are available only to internal customers or employees of an organization, and are not to anyone outside the organization. ***Enterprise Intranet*** is usually an organization's internet, which is accessible to employees of this organization and other responsible parties using the secure login environment. This is done to protect the organization's sensitive information, and not allow all kinds of online "intruders" to access this information (see Figure 1-2). Companies are also required, in many cases, to have protected and safe connections between their web sites and those of their suppliers, distributors, logistics and financial services, and many others. ***Enterprise Extranet*** uses internet technology to establish a private network connection between a company's e-commerce web site and its external suppliers, service, and information providers (see Figure 1-2). In some cases, an extranet may be regarded as a part of the company's intranet that is expanded to users outside the company.

Figure 1-2: E-commerce Networking

In many cases, instead of "e-commerce" the term "***e-business***" is used. Are these terms different or the same? In general, these terms are, in fact, different. "E-business" is a broader concept than "e-commerce," in that it does not only represent commercial applications of buying and selling. It is also associated with servicing customers and collaborating between business partners, as well as conducting Internet-related business transactions within or outside an organization. However, in modern practice, these two terms are used interchangeably, and become almost like synonyms. Most e-business web sites contain e-commerce-related activities like selling or buying online. At the same time, many e-commerce web sites have elements of collaboration with customers or business partners, as well as online service and support. In this book, we will be using the term "e-

commerce" to designate both commercial and business activities, i.e., e-business and e-commerce on the Internet.

1.3 HISTORY AND CURRENT DEVELOPMENT OF E-COMMERCE

The "life" of e-commerce as a business system is relatively short as compared with many other existing business and management systems. ***E-commerce started around 1995***, and since then has had an interesting and sometimes turbulent history.

The proliferation of Internet-based computer technology in the last five years of the 20th century triggered extensive development of different kinds of e-commerce tools and applications. Many new e-commerce companies were born at that time. Their intention was to sell products to business and individual consumers, outsource/buy products from businesses, or provide a virtual environment to facilitate the exchange of products and services between the companies. It was a time of "irrational exuberance," when every day several Internet-based companies started their e-commerce business online with great expectations of soon becoming a publicly traded company and earning a tremendous amount of cash after its initial public offerings (IPO) in the stock market. The notion behind this was that the stock market would quickly appreciate almost any new e-commerce development. This was the era of the so called ***"dot-com bubble"*** of e-commerce. The term evidently came from the point that most of these companies had an Internet name of their web site ending with ".com."

By the year 2000, the dot-com bubble reached its peak, from which started an almost freefall of the dot-com stock prices, overall customer excitement and expectation, and venture investments in e-commerce. Between 2000 and 2003, a significant number of dot-com companies closed, were acquired, or merged with other businesses. The many reasons for this crash of the dot-com bubble have been well documented in various literature sources. However, the main reason for the disappearance of these companies was their inability to be profitable and to provide value to their customers. "If it does not make cents, it does not make sense." Many companies were created by bright computer professionals who knew how to design and start a technologically advanced e-commerce solution. However, these professionals had little to no ability to provide an efficient and effective business-related model for their solutions.

At the end of the crash in 2001–2002, a new trend appeared evident within e-commerce—a trend of developing and implementing e-commerce solutions that were not only more business-oriented and targeted the need to provide significant value to the customers but also by doing that, be more financially sound, i.e., profitable. This designated a new era of e-commerce that had some major differences with the previously used "dot-com" approach in e-commerce (see Table 1-2).

The table clearly depicts the main differences between the old and new approaches to e-commerce. Instead of old e-commerce decisions being based on technology innovations and revenue emphasis, the new e-commerce development is mostly based on the need to develop a solid business model that would emphasize value-added offerings for the customers and profits for the company. According to some literature sources [5], more than 60% of all e-commerce companies were profitable in 2004 as opposed to only 10% of them being profitable in 2001. Instead of the

entrepreneurial nature of most dot-com companies and pure online strategies (doing all business online), the new e-commerce development is mostly associated with traditional firms. These firms range from large companies like IBM and GE to a myriad of small and mid-size enterprises (SME) who embrace an e-commerce strategy as a part of the overall business strategy. In this case, it may be called a ***mixed*** or ***"click-and-brick" strategy***. Finally, during the e-commerce evolution, many special standards regulating its activities and communication through e-commerce have been developed or improved. For example, XML (eXtensible Markup Language) and XBML (business XML) computer languages were developed to improve communication between different e-commerce web sites. The Electronic Product Code (EPC) was created to recognize the product being sold or delivered using mobile commerce equipment.

Table 1-2: Dot-Com and New E-commerce Compared

"DOT-COM" E-COMMERCE	*NEW E-COMMERCE*
Technology-driven	Business-driven
Revenue growth emphasis	Earning and profits emphasis
Venture capital financing	Traditional financing
Pure online strategies	Mixed "click-and-brick" strategies
Entrepreneurial	Traditional firms
Lack of standards	Stronger regulation/standards

A new changing trend in e-commerce is associated with utilization of the Internet-related technology and software for improving communication, information sharing, collaboration, and functionality of the Web, which is commonly defined as ***Web 2.0***. Web 2.0 means proliferation of connectivity and interactivity of web-delivered content that allows users to—besides obtaining information from a web site—own the data on the Internet, gain control over this data, and add value to the web site as they use it. The key Web 2.0 applications and services include [6]:

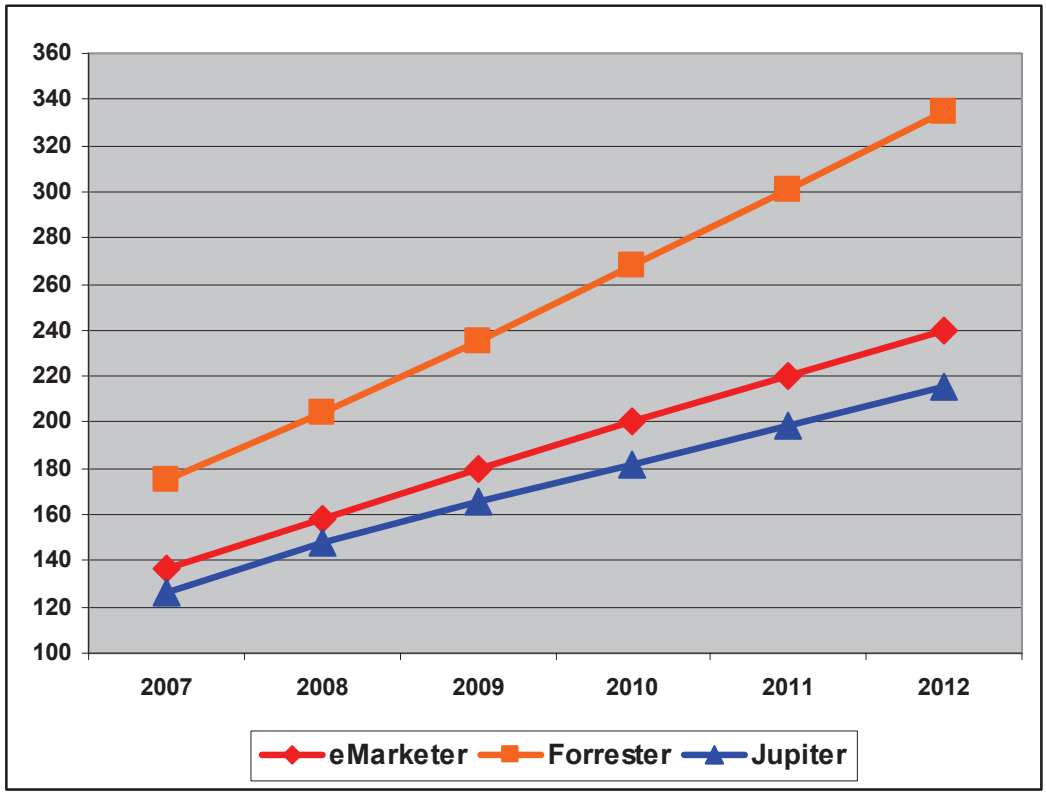
- ***Blog (web-log)***–a webpage consisting of brief user opinions, views, and information, or links (also called posts), arranged chronologically within a menu-driven format.
- ***Wiki***–a webpage or set of web pages that can be easily edited by anyone who is allowed access. A well-known example is Wikipedia, the free Internet encyclopedia.
- ***Podcast***–audio recordings, usually in MP3 format, of talks, interviews and lectures, which can be played either on a desktop computer or on a wide range of handheld MP3 devices.
- ***Multimedia sharing***–services that facilitate the storage and sharing of multimedia content such as video (YouTube), photos (Flickr), and podcasts (Odeo).

- ***Social networking***–professional and social networking sites like facebook.com and myspace.com that facilitate meeting people, finding like minds, and sharing content.
- ***RSS***–a family of formats which allow users to find out about updates to the content of RSS-enabled websites, blogs or podcasts without actually having to go and visit the site. Information from the website (typically, a new story's title and synopsis, along with the originating website's name) is collected within a feed (which uses the RSS format) and 'piped' to the user in a process known as syndication.

1.4 E-COMMERCE GROWTH

Since its creation, e-commerce has experienced steady growth with an increasing rate of growth in the first decade of the 21st century. Survey after survey conducted by a variety of companies has indicated an accelerating volume of transactions in business-to-consumer (B2C) and particularly in business-to-business (B2B) e-commerce. In 2003–2005, more than 70% of companies in the United States have experimented with purchasing online; and around 15–20% of their total spending was being channeled via the Internet [7, 8]. According to the U.S. Census Bureau, B2B e-commerce covers more than 20% of all business transactions in the U.S.A [9].

Figure 1-3: Comparative Estimates: U.S. Retail E-commerce Sales, (billions) [10]



Although B2B sales continue to dwarf B2C sales, many retailers now see online sales as their best opportunity for new growth. The estimates made by different consulting firms [10] show that by the end of 2012, the sales through e-commerce will be between 210 and 340 billion dollars (see Figure 1-3). The average growth of retail e-commerce is estimated to be from 12% to 14% annually [11]. In addition, the proportion of retail e-commerce in the total U.S. retail sales is predicted to grow from approximately 4% in 2006 to 13% in 2010 [11].

The implementation of e-commerce also varies across the globe. The highest level of e-commerce sales as a proportion of the total sales is in Australia, South Korea, and France—with more than 16% of the total sales in 2004, United States—more than 13%, and Japan—around 9% [12].

The projected e-commerce growth raises the interest of researchers to understand how effective and efficient this e-commerce implementation has been, and what influences e-commerce results in manufacturing and service organizations. Despite the evident increase in importance of e-commerce and effectiveness of its implementation, until recently little research has been undertaken to investigate factors that influence the results of e-commerce solutions. This knowledge not only has potential benefits for organizations considering e-commerce implementation but also for those organizations that have already engaged in such implementations, because it can provide them with an understanding of how to facilitate and improve their implementation processes.

1.5 MAIN CHARACTERISTICS, DIMENSIONS, AND TYPES OF E-COMMERCE

The main characteristics of e-commerce are its pervasiveness and inexorability. ***Pervasiveness of e-commerce*** means its persistent development and proliferation in business and non-profit organizations of various sizes. ***Inexorability of e-commerce*** represents its inevitable and unstoppable nature in terms of the high rates of growth that were described in the previous section. Inexorability also means that e-commerce tends to transcend geographical, cultural, and political differences of nations and countries and enables common business information and web sites for the entire world. Finally, inexorability represents the ability of e-commerce to change the business environment, and create completely new business relations. E-commerce development has completely revitalized different industries including jewelry, banking, telecommunications, hotels, real estate, software, and many others [13].

If you ask yourself why e-commerce development is so pervasive and inexorable, the answer should come from the simple fact that e-commerce can be a rich source of value for organizations that employ it. This value comes from ***e-commerce disintermediation***, which means an act of taking out an intermediary organization used for channel delivery of products and services. For example, direct sales of computers through the Internet by Dell or Hewlett-Packard (HP) eliminates any intermediate organizations like distributors and retailers. This leads to reduced cost of product delivery to the customers and increased profits. At the same time, ***e-commerce re-intermediation*** facilitates creation of third party organizations that provide virtual environments for connecting buyers and sellers or, generally, business partners for transactions on the Internet. The creation of companies like eBay or Amazon is a typical example of e-commerce re-intermediation.

Organizations may have various levels of e-commerce implementation. The differentiation between these organizations is based upon three dimensions [14]:

- ***Products and services*** produced and sold by an organization that can range from traditional physical to fully digitized products (services).
- ***Processes*** established in the organization that can also vary from physical to fully digitized (online) processes.
- ***Agent***, which is an organization itself, ranging from a traditional "brick-and-mortar" firm to a virtual online organization.

Pure e-commerce organizations are characterized by their products/services and processes being completely digitized, as well as the whole organization being a digital agent company. These organizations are also known as ***virtual or pure-play e-commerce*** companies. An example of such an organization is www.YouTube.com, a famous online site for uploading, storing, and sharing videos worldwide. It is a pure e-commerce company, because all its products/services, like video play lists or subscriptions, are digitized; its processes like video search, creating video play lists, etc. are also digitized; and, finally, this organization is a virtual (completely online) digital agent.

Partial e-commerce organizations are those organizations that may have some physical e-commerce dimensions like physical products or processes. For example, Amazon purchases and stores books (physical products) that it then sells online. The company also organizes a logistics (physical) process of book delivery to the customers. However, Amazon also sells many digital products (like videos and music) and provides a variety of digitized processes. In this case, Amazon is a typical partial e-commerce organization.

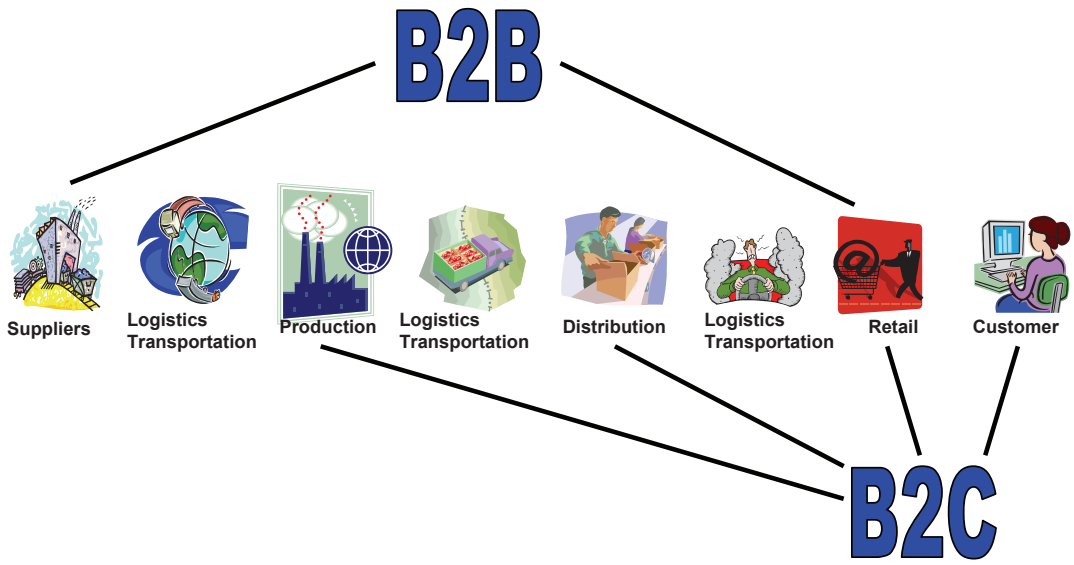
"Click-and-mortar" organizations are companies that conduct some e-commerce activities, for example, selling computers, printers, or software through e-commerce channels like HP or Gateway, but provide their primary business in the physical world. Contrary to that, ***"brick-and-mortar" organizations*** perform all their business without the Internet by selling their physical products in stores or conducting processes by means of physical agents only. The number of "brick-and-mortar" companies have significantly shrunk over the years as e-commerce proliferation has grown in a variety of traditional companies.

E-commerce organizations are also differentiated by the transactions and interactions they make. One of the common types are the ***Business-to-Business (B2B) e-commerce*** organizations that provide transactions, communication, and interactions between business partners. ***B2B transactions*** may include selling products and services to businesses, outsourcing from suppliers, logistics, and distribution of products to companies, financial transactions, and others. B2B transactions may be done on the downstream of the organization's supply chain, i.e., from raw materials, to manufacturing organizations, and then to distribution and retail (see Figure 1-4). B2B can also be done on the upstream of the company supply chain, for example purchasing materials from suppliers, or outsourcing a logistics provider for a manufacturing organization (see Figure 1-4).

Another very common type is ***Business-to-Consumer (B2C) e-commerce*** organizations which provide transactions, communication, and interactions with consumers (end users). These

organizations can be manufacturing, distribution, retail, or other companies that sell their products or services to consumers online. B2C transactions and interactions are done on the downstream of the organization's supply chain (see Figure 1-4).

Figure 1-4: B2B and B2C E-commerce



Since the beginning of the e-commerce era, both B2B and B2C transactions have experienced consistent growth in revenues. These revenues are derived from selling products and services online to business customers or end consumers. They also include revenues from financial transactions via the Internet.

The volume of transaction revenues in B2B e-commerce is substantially larger than that of B2C. For example, in 2004 the B2B transaction revenues in U.S.A were around $1,812 billion or 93% of all e-commerce revenues. At the same time, the revenues from B2C e-commerce transactions were $130 billion, which was just 7% of the total business-related e-commerce transactions [9].

Besides B2B and B2C transactions, e-commerce transactions and interactions may have other types:

- ***Consumer-to-Consumer (C2C)*** e-commerce is used in organizations that provide private sales and auctions between individual consumers.
- ***Peer-to-Peer (P2P)*** e-commerce allows networked peer computers to share data and processing with each other directly; can be used in C2C, B2B, and B2C e-commerce.
- ***Government-to-Business (G2B)*** and ***Government-to-Consumer (G2C)*** e-commerce enable government organizations to provide information, interaction, business, and services to companies and consumers respectively.
- ***Business-to-Business-to-Consumer (B2B2C)*** e-commerce organizations provide some products or services to client businesses that maintain their own customers. eBay, for example,

provides a virtual marketplace to its customers (business and individuals) that sell products through eBay to their own customers.

- ***Mobile Commerce (M-commerce)*** makes possible e-commerce transactions and activities to be conducted in a wireless environment, for example, buying products and services from a web site on a cell phone.
- ***Location-based Commerce (L-commerce)*** provides m-commerce transactions targeted at individuals in specific locations and at specific times, like navigation systems in cars.
- ***Intra-business e-commerce*** includes all internal organizational activities that involve the exchange of goods, services, or information.
- ***Collaborative Commerce (C-commerce)*** creates an environment where individuals or groups communicate or collaborate online.

Many of these transactions types, including mobile and location-based commerce, collaborative commerce, and business-to-business-to-consumer commerce will be discussed in this book.

1.6 VALUE CREATION IN E-COMMERCE

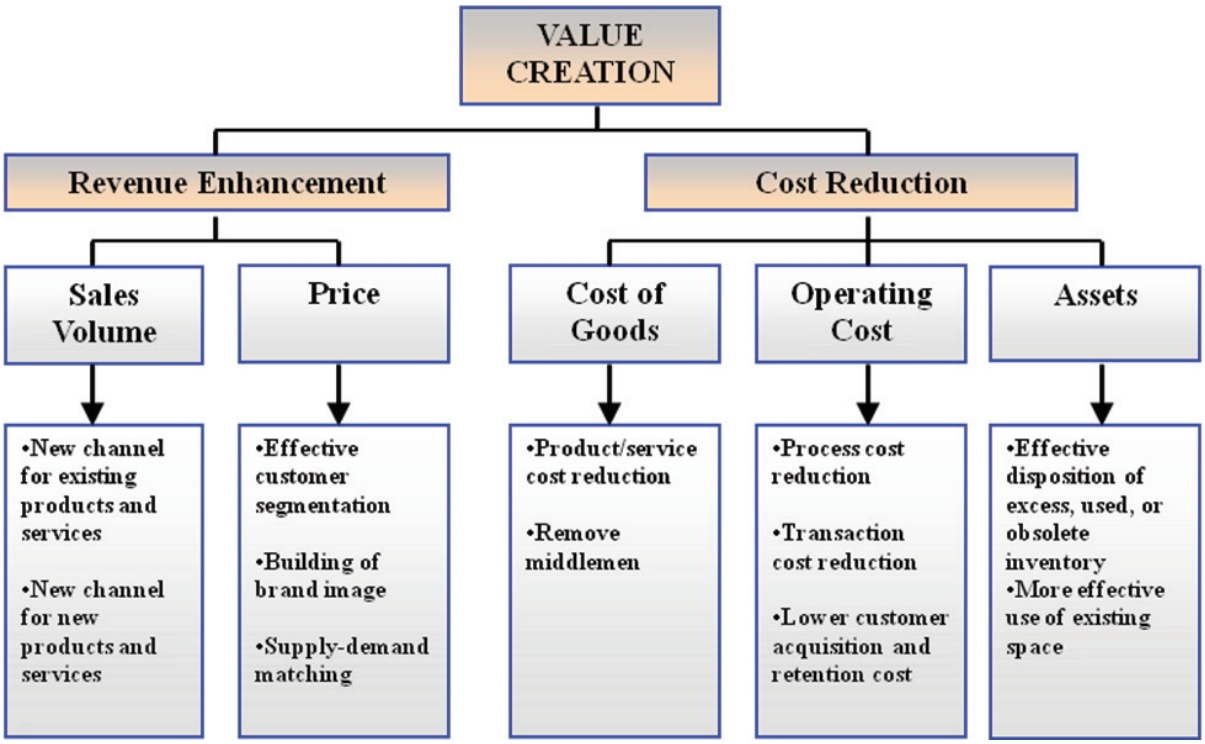
As previously mentioned, the main reason for the growth and proliferation of e-commerce (pervasiveness and inexorability) is its ability to create value for an organization that implemented the e-commerce solutions, for the customers of this organization, and for its partners and suppliers. ***Value creation*** represents the potential or expected and actual ***monetary and non-monetary results*** of utilizing an e-commerce business model. The main monetary results of value creation include ***revenue enhancement*** through sales growth and price differentiation, and ***cost reduction*** related to cost of goods sold, operating costs, and asset intensity reduction (see Figure 1-5).

Revenue enhancement is the first aspect of value creation. E-commerce develops a new online channel for selling a company's products and services along with existing traditional channels. This potentially generates additional sales volume through this channel, and, at the same time, can facilitate product sales through the existing channels. For example, a consumer may use Walmart's web site to purchase a variety of products that can be then sent to a nearby store for customer pickup. At the same time, while coming to the store for the pickup, the consumer may potentially end up buying some more products from the company. In this case, the channels do not cannibalize, but rather complement each other and provide higher sales volumes and revenues. The revenue increase may be also associated with the ability to quickly adjust prices depending on customer segments (for example, repeat customers will pay a higher price than new customers will) or by increasing prices through building the company's brand name recognition on the Internet. In addition, e-commerce can enable quick matching of customer demand with existing supply of products, and, thus, provide better knowledge of what prices need to be established and promoted.

Besides the opportunity of increased revenue, e-commerce is also an important source of ***cost reduction***. This is the second aspect of value creation through e-commerce (see Figure 1-5). The cost of goods sold through online web sites may be reduced by providing a direct selling channel

to the customers and reducing the need for intermediaries like wholesalers and retailers. Taking out the intermediaries can reduce the cost of sales up to 25-30%. At the same time, by using e-commerce for outsourcing materials, components, and services, companies can reduce process and transaction costs associated with outsourcing. E-commerce enables companies to simplify outsourcing processes and reduce related costs. Finally, e-commerce creates opportunities for *asset intensity reduction*, which means (a) reducing capital costs by effective, speedy disposition (selling) of unnecessary or old equipment as well as excess or obsolete inventory, and (b) more effectively using existing space by reducing inventory clutters with e-commerce.

Figure 1-5: Creating Monetary Value in E-commerce



The results of the survey conducted among the companies that implemented e-commerce solutions [15] revealed that more than 61% of respondents stated that implemented e-commerce solutions increased or significantly increased revenues. At the same time, 58% of those responding achieved a decrease or significant decrease in costs through the implementation of e-commerce solutions. According to the survey results, the most important cost categories that were reduced appeared to be transactional cost specifically in terms of paperless transactions, administrative cost associated with reduction of purchasing procurement personnel, inventory cost, and reduction of prices of materials and services. All this represents typical cost savings results associated with e-commerce implementation.

The ***non-monetary value creation*** may incorporate a variety of tangible and intangible results relevant to e-commerce development:

Improved customer satisfaction through providing more choices of products, services, and information.
Customization and personalization of product and service offering.
Improved quality of products and services.
Faster delivery schedules.
Extended hours of work (24 hours, 7 days a week).
Global outreach of products, services, and information.
Permanent access to information.

According to the survey [15], organizations that implemented e-commerce presented relatively evenly distributed answers about the benefits of e-commerce implementation, which are shown in Table 1-3.

Table 1-3: Benefits of Implementing E-commerce Solutions

MAIN BENEFITS OF IMPLEMENTING E-COMMERCE SOLUTIONS IN ORGANIZATIONS	*NUMBER OF RESPONSES (%)*
Shorter procurement cycle	13.3%
Improve communication and relationships with suppliers	13.3%
Improve communication and relationships with customers	12.6%
Better reliability and control of purchase orders	11.9%
New channel of marketing and sale with global outreach	10.4%
Reduce inventory level and cost	8.9%
Eliminate or reduce the number of middlemen	8.9%
Reduce purchase prices	7.4%

However, responses to the question of drawbacks and problems in implementing e-commerce solutions demonstrated that the three most critical problems in e-commerce implementation were high costs of implementation, data security, and low liquidity (not enough buyers and sellers), which covered 66.7% of responses (see Table 1-4).

Table 1-4: Drawbacks and Problems in E-commerce Implementation

MAIN DRAWBACKS AND PROBLEMS IN IMPLEMENTING E-COMMERCE SOLUTIONS IN ORGANIZATIONS	*NUMBER OF RESPONSES (%)*
High costs of implementing e-commerce solutions	26.7%
Data security	26.7%
Not enough buyers and/or sellers online	13.3%
Poor integration with internal "back-office" systems	8.9%
Low return on investment and/or long payback period	6.7%
Not enough speed of connection/bandwidth problems	6.7%

1.7 CHAPTER SUMMARY: MANAGERIAL ASPECTS OF E-COMMERCE

1. ***E-commerce*** has become a significant element in the modern global economic environment. It represents the use of a computer network, primarily the Internet, to buy and sell products, services, information, and communication. E-commerce is also an application of technology using the Internet. In addition, it is a tool for increasing efficiency and lowering costs in organizations.
2. The main characteristics of e-commerce are its ***pervasiveness*** and ***inexorability***. Pervasiveness of e-commerce means its persistent development and proliferation in business and non-profit organizations of various sizes. Inexorability of e-commerce represents its inevitable and unstoppable nature in terms of the high rates of growth that were described in the previous section.
3. e-commerce can be a rich source of value for organizations that employ it. E-commerce ***disintermediation*** means an act of taking out intermediary organizations used for channel delivery of products and services though e-commerce supply chain. At the same time, e-commerce ***re-intermediation*** facilitates creation of third party organizations that provide virtual environments for connecting buyers and sellers or generally, business partners for transactions on the Internet.
4. Organizations may have various levels of e-commerce implementation. ***Pure e-commerce*** organizations are characterized by their products/services and processes being completely digitized. ***Partial e-commerce*** organizations are those organizations that, besides digital products and processes, may have some physical e-commerce dimensions like physical products or processes. ***"Click-and-mortar"*** organizations are companies that conduct some e-commerce activities, but provide their primary business in the physical world.

5. E-commerce organizations are also differentiated by the transactions and interactions they make. The most common types are Business-to-Business (B2B) and Business-to-Consumer (B2C) e-commerce transactions. Besides B2B and B2C transactions, e-commerce transactions and interactions may have other types: consumer-to-consumer (C2C), business-to-business to-consumer (B2B2C), government-to-business (G2B), mobile commerce (M-commerce), Location-based Commerce (L-commerce), and some others.
6. Value creation in e-commerce represents the potential or expected and actual monetary and non-monetary results of utilizing an e-commerce business model. The ***main monetary results*** of value creation include revenue enhancement through sales growth and price differentiation, and cost reduction related to cost of goods sold, operating costs, and assets intensity reduction. The ***non-monetary value creation*** may incorporate a variety of tangible and intangible results relevant to e-commerce development like improved customer satisfaction and quality, faster delivery schedules, extended hours of work, global outreach, and permanent access to information.

REVIEW AND DISCUSSION QUESTIONS FOR CHAPTER 1

1. What drives people and organizations to increase their utilization of the Internet?
2. Explain the technology, business, and value aspects of e-commerce.
3. What are the differences between "dot-com" and new approaches in e-commerce?
4. What is Web 2.0? Explain the difference between the original and Web 2.0 applications.
5. Why is e-commerce fundamentally different from traditional commercial applications?
6. Explain the meaning of pervasiveness and inexorability of e-commerce.
7. Why proportion of B2C e-commerce in the overall retail is significantly smaller than that in B2B e-commerce?
8. Does e-commerce always eliminate the intermediary companies?
9. Provide a definition of C-commerce and L-commerce.
10. For e-commerce value creation, explain the difference between asset intensity reduction and cost of goods sold reduction.

INTERNET CASES AND EXERCISES FOR CHAPTER 1

1. Study the following articles from BusinessWeek.com: *E-Biz Strikes Again* on May 10, 2004 (www.businessweek.com/magazine/content/04_19/b3882601.htm) and *Best of the New Web: Special Report*, published on September 26, 2005 (http://www.businessweek.com/magazine/toc/05_39/B39520539web.htm). Answer the following questions:
   a. According to the articles, what are industries that e-commerce is going to "remake?"
   b. Explain how e-commerce has changed these industries.
   c. Explain why e-commerce solutions are successful in these industries.

d. Besides the industries specified in the reading, are there other industries that have been significantly changed due to e-commerce? Use the Internet search to explain your answer.

2. Access the web site of Cal State East Bay, www.csueastbay.edu and examine its pages' contents. Does this web site represent e-commerce or e-business environment? Provide a detailed explanation of your conclusion.
3. Do online search for information on Google. Specifically, search for articles from Business Week Magazine, Wall Street Journal, and Newsweek Magazine in 2004-2009. Also, examine the Google's main site, www.Google.com in terms of Google's products and service. Understand how AdWord, AdSense, and Google Appliance work. Answer the following questions:
   a. Explain main reasons of Google's success.
   b. What are Google's e-commerce applications? Explain how they work.
   c. What are Google's e-commerce dimensions (product, process, and agent)?
   d. How does Google create value? Explain elements of value creation (revenue growth and cost reduction)
   e. What are the main benefits provided by Google? What are the main limitations?

REFERENCES

[1] Cable Network News (CNN), *"Top 25 Innovations: The Internet Ranked No 1, Changed the World,"* March 1, 2005, retrieved from *www.cnn.com/2005/TECH/01/03/cnn25.top25.innovations/index.html*.

[2] Drucker, P., *Managing in the Next Society*, Truman Talley Book, New York, 2002.

[3] "The Difference between the Internet and the World Wide Web," *Webopedia*, February 29, 2008, retrieved from *www.webopedia.com*.

[4] Internet Domain Survey, "Number of Hosts Advertised in the DNS," *Internet System Consortium (ISC)*, January 2008, retrieved from www.isc.org/index.pl?/ops/ds.

[5] Mullaney, T.J., "E-biz Strikes Again," *Business Week*, Special Report -- E-Biz, May 10, 2004, retrieved from *www.businessweek.com*.

[6] Anderson, P., "What is Web 2.0? Ideas, Technologies, and Implications for Education," *JISC Technology and Standard Watch*, February 2007, 1–63.

[7] Bednarz, A., "Analyst Firm Predicts E-business Upswing", *Network World*, September 1, 2004.

[8] Juniper Media Metrix, "The Forecast for Business-to-Business e-commerce", *DM Review*, Jan. 17, 2006, retrieved from *www.DMreview.com*.

[9] U.S. Census Bureau, "e-commerce 2004," May 25, 2006, retrieved from *www.census.gov/estats.*

[10] E-Business News, "US Retail e-commerce Set for Growth," February 2008, retrieved from *www.ebusinessnews.info/?action=read&article=684.*

[11] "Forrester Research US eCommerce Forecast: Online Retail Sales to Reach $329 by 2010," September 19, 2005, retrieved from *www.internetadssales.com*.

[12] eMarketer, "Report on Europe e-commerce: B2B and B2C," July 2003, retrieved from *www.emarketer.com/Report.aspx?b2b_b2c_euro_jul03.*

[13] Special Report–E-biz, "E-biz Strikes Again," BusinessWeek, May 10, 2004, retrieved from *www.businessweek.com/magazine/content/04_19/b3882601.htm*.

[14] Whinston, A, Choi, S.Y., and Stahl, D. O., *The Economics of Electronic Commerce*, 1st McMillan Technical Publishing, 1997.

[15] Radovilsky, Z. and V. Hegde. Factors Influencing e-commerce Implementation: Analysis of Survey Results, *Journal of Academy of Business and Economics*, Vol. IV, No.1, 2004, p. 29–37.