LESSON 2:
BENEFITS AND LIMITATIONS OF E-COMMERCE

Objectives
After this lecture the students will be able to:

- Describe the categories of E-commerce
- Describe the benefits and limitations of E Commerce

In the previous lecture we divided the applications of E-commerce into three categories, today we will divide categorize E-commerce according to the parties involved in the business.

- Business-to-business (B2B). Most of E-commerce today is of this type. It includes EDI transactions described earlier and electronic market transactions between organizations.

- Business-to-consumer (B2C). These are retailing transactions with individual shoppers. The typical shopper at Amazon.com is a consumer, or customer.

- Consumer-to-consumer (C2C). In this category consumer sells directly to consumers. Examples are individuals selling in classified ads (e.g., classified2000.com) and selling residential property, cars, and so on. Advertising personal services on the Internet and selling knowledge and expertise is another example of C2C. Several auction sites allow individuals to put items up for auctions. Finally, many individuals are using intranets and other organizational internal networks to advertise items for sale or services.

- Consumer-to-business (C2B). This category includes individuals who sell products or services to organizations, as well as individuals who seek sellers, interact with them, and conclude a transaction.

- Nonbusiness EC. An increased number of nonbusiness institutions such as academic institutions, not-for-profit organizations, religious organizations, social organizations, and government agencies are using various types of EC to reduce their expenses (e.g., improve purchasing) or to improve their operations and customer service. (Note that in the previous categories one can usually replace the word business with organization.)

- Intrabusiness (organizational) EC. In this category we include all internal organizational activities, usually performed on intranets, that involve exchange of goods, services or information. Activities can range from selling corporate products to Employees to online training and cost reduction activities.

Everything has its pros and cons, same is with E Commerce, lets have a look.

Benefits and Limitations

The Benefits of EC
Few innovations in human history encompass as many potential benefits as EC does. The global nature of the technology, low cost, opportunity to reach hundreds of millions of people (projected within 10 years), interactive nature, variety of possibilities, and resourcefulness and rapid growth of the supporting infrastructures (especially the Web) result in many potential benefits to organizations, individuals, and society. These benefits are just starting to materialize, but they will increase significantly as EC expands.

Benefits to Organizations

The benefits to organizations are as follows:

- Electronic commerce expands the marketplace to national and international markets. With minimal capital outlay, a company can easily and quickly locate more customers, the best suppliers, and the most suitable business partners worldwide. For example, in 1997, Boeing Corporation reported a savings of 20 percent after a request for a proposal to manufacture a subsystem was posted on the Internet. A small vendor in Hungary answered the request and won the electronic bid. Not only was the subsystem cheaper, but it was delivered quickly.

- Electronic commerce decreases the cost of creating, processing, distributing, storing, and retrieving paper-based information. For example, by introducing an electronic procurement system, companies can cut the purchasing administrative costs by as much as 85 percent. Another example is benefit payments. For the U.S. federal government, the cost of issuing a paper check is 430. The cost of electronic payment is 20.

- Ability for creating highly specialized businesses. For example, dog toys which can be purchased only in pet shops or department and discounte stores in the physical world, are sold now in a specialized www.dogtoys.com (also see www.cattoys.com).

- Electronic commerce allows reduced inventories and overhead by facilitating “pull”-type supply chain management. In a pull-type system the process starts from customer orders and uses just-in-time manufacturing.

- The pull-type processing enables expensive customization of products and services, which provides competitive advantage to its implementers. A classic example is Dell Computer Corp., whose case will be described later.

- Electronic commerce reduces the time between the outlay of capital and the receipt of products and services.
• Electronic commerce initiates business processes reengineering projects. By changing processes, productivity of salespeople, knowledge workers, and administrators can increase by 100 percent or more.
• Electronic commerce lowers telecommunications cost-the Internet is much cheaper than VANs.
• Other benefits include improved image, improved customer service, newfound business partners, simplified processes, compressed cycle and delivery time, increased productivity, eliminating paper, expediting access to information, reduced transportation costs, and increased flexibility.

Benefits to Consumers
The benefits of EC to consumers are as follows:
• Electronic commerce enables customers to shop or do other transactions 24 hours a day, all year round, from almost any location.
• Electronic commerce provides customers with more choices; they can select. Electronic commerce frequently provides customers with less expensive products and services by allowing them to shop in many places and conduct quick comparisons.
• In some cases, especially with digitized products, EC allows quick delivery.
• Customers can receive relevant and detailed information in seconds, rather than days or weeks.
• Electronic commerce makes it possible to participate in virtual auctions.
• Electronic commerce allows customers to interact with other customers in electronic communities and exchange ideas as well as compare experiences.
• Electronic commerce facilitates competition, which results in substantial discounts.

Benefits to Society
The benefits of EC to society are as follows:
• Electronic commerce enables more individuals to work at home and to do less traveling for shopping, resulting in less traffic on the roads and lower air pollution.
• Electronic commerce allows some merchandise to be sold at lower prices, so less affluent people can buy more and increase their standard of living.
• Electronic commerce enables people in Third World countries and rural areas to enjoy products and services that otherwise are not available to them.
• This includes opportunities to learn professions and earn college degrees.
• Electronic commerce facilitates delivery of public services, such as health care, education, and distribution of government social services at a reduced cost and/or improved quality. Health-care services, for example, can reach patients in rural areas.

The Limitations of EC
The limitations of EC can be grouped into technical and nontechnical categories.

Technical Limitations of EC
The technical limitations of EC are as follows:
• There is a lack of system security, reliability, standards, and some communication protocols.
• There is insufficient telecommunication bandwidth.
• The software development tools are still evolving and changing rapidly.
• It is difficult to integrate the Internet and EC software with some existing applications and databases.
• Vendors may need special Web servers and other infrastructures, in addition to the network servers.
• Some EC software might not fit with some hardware, or may be incompatible with some operating systems or other components.

As time passes, these limitations will lessen or be overcome; appropriate planning can minimize their impact.

NonTechnical Limitations
Of the many nontechnical limitations that slow the spread of EC, the following are the major ones.
• Cost and justification The cost of developing EC in-house can be very high, and mistakes due to lack of experience may result in delays. There are many opportunities for outsourcing, but where and how to do it is not a simple issue. Furthermore, to justify the system one must deal with some intangible benefits (such as improved customer service and the value of advertisement), which are difficult to quantify.
• Security and privacy These issues are especially important in the B2C area, especially security issues which are perceived to be more serious than they really are when appropriate encryption is used. Privacy measures are constantly improved. Yet, the customers perceive these issues as very important, and, the EC industry has a very long and difficult task of convincing customers that online transactions and privacy are, in fact, very secure.
• Lack of trust and user resistance Customers do not trust an unknown faceless seller (sometimes they do not trust even known ones), paperless transactions, and electronic money. So switching from physical to virtual stores may be difficult.
• Other limiting factors. Lack of touch and feel online. Some customers like to touch items such as clothes and like to know exactly what they are buying.
• Many legal issues are as yet unresolved, and government regulations and standards are not refined enough for many circumstances.
• Electronic commerce, as a discipline, is still evolving and changing rapidly. Many people are looking for a stable area before they enter into it.
• There are not enough support services. For example, copyright clearance centers for EC transactions do not exist, and high-quality evaluators, or qualified EC tax experts, are rare.
• In most applications there are not yet enough sellers and buyers for profitable EC operations.
• Electronic commerce could result in a breakdown of human relationships.
• Accessibility to the Internet is still expensive and/or inconvenient for many potential customers. (With Web TV, cell telephone access, kiosks, and constant media attention, the critical mass will eventually develop.)

Despite these limitations, rapid progress in EC is taking place. For example, the number of people in the United States who buy and sell stocks electronically increased from 300,000 at the beginning of 1996 to about 10 million in fall 1999. As experience accumulates and technology improves, the ratio of EC benefits to costs will increase, resulting in a greater rate of EC adoption. The potential benefits may not be convincing enough reasons to start EC activities.

Summary:
• We can categorize E-commerce according to the parties involved in the business like B2B, B2C, C2C and C2B.
• The benefits of E-Commerce to Organizations include expansion of the marketplace to national and international markets, decreases in the cost of creating, processing, distributing, storing, and retrieving paper-based information, reduction in inventories.
• E-commerce enables customers to shop or do other transactions 24 hours a day and provides customers with more choices.
• Electronic commerce facilitates delivery of public services, such as health care, education, and distribution of government social services at a reduced cost and/or improved quality.
• Limitations of E-Commerce can be technical like lack of system security, reliability, standards, and some communication protocols and non-technical limitations like the cost involved in developing in-house E-Commerce and the security of data.

Exercise:
1. List the organizational, consumer and societal benefits of EC.
2. Carefully examine the nontechnological limitations of EC. Which of them are company-dependent and which are generic.
3. Why it is said that EC is a catalyst of fundamental changes in organizations?
4. Explain how EC can reduce cycle time, improve empowerment of employees and support enhancement of teams.
5. How can EC facilitate customization of products and services.

Notes