

Impact of Information Technology on Global Business

Module 3

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Teaching Notes in Notes Page View



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Information Technology

- The development, implementation, and maintenance of computer hardware and software systems to organize and communicate information electronically.
- In the broadest sense, information technology refers to both hardware and software that are used to store, retrieve, and manipulate information.

The development implementation and maintenance of computer hardware and software systems to organize and communicate information electronically.

Efficiency and Effectiveness of IT

- Internet make the world smaller, large companies can now contact with employees and partners around the globe.
- IT also shrieked the distance and time, simplified the complex business processes
- For example: JP Morgan is investing over 24 billion in over 1000 companies around the world



The Internet makes the world smaller. The ability to communicate and exchange information instantaneously and across vast distances has enabled more individuals and businesses to participate in the economy, regardless of their location. Large companies can connect with employees, suppliers, and partners around the globe, and small businesses can find their customers anywhere in the world.

Internet breaks down logistical barriers, offering greater flexibility and power in the way they do business. It shrinks time and distance, simplifies complex business processes.

For example, JP Morgan is investing over 24 billion in over 1000 companies around the globe. It is even hard to imagine twenty years ago.

Management Teams and Diversity

- Changes in the environment have been in need of increasing their staffing clientele to become more global
- Change of diversity has caused faster turnaround in business
- Better information has been spread as employees no longer have to waste time with data and reports



Through changes in the environment companies have been in need of increasing their staffing clientele to become more global

With the change of diversity within the companies there has been a faster turnaround in business

Better information has been spread between companies as employees no longer have to waste time with data and reports

Management Teams and Diversity

- There has been a decrease in the amount of IT work with new methods of conferencing between diverse management teams across the country
- External partners are seeing benefits with new diverse company training programs



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Growth of E-commerce

- Out of 2800 manufacturing businesses surveyed in 2005, 96% use the internet and 67% have home pages.
- Out of 11,056 service sector companies surveyed, 92% use the internet and 60% have home pages.

Table 1
Examples of businesses using the Internet-based e-commerce

| Business | Application of Internet-based e-commerce |
|----------------------|--|
| Airlines | Over a 100 airlines have created Web sites and are actually receiving orders for tickets |
| Banks | There are more than 140 banks on the Web from 26 countries |
| Media and publishing | Many publishing houses have developed Web versions of traditional print media, and entirely new Electronic Magazines "e-zines" |
| Retail | Many retailers are now marketing on the Web and hundreds of on-line products and services are offered |

Internet-based e-commerce was expected to reach \$150 billion by the year 2000 and more than \$1 trillion by the year 2010.

Sales generated via the Web grew from \$17.6 million in 1994 to nearly \$400 million in 1995 (a growth rate of over 2,100 per cent);

The number of sites using the Internet for product transactions increased from 14 percent in 1995 to 34 percent in 1996 and to a projected increase of 44 percent in the next three years.

Growth of E-Commerce



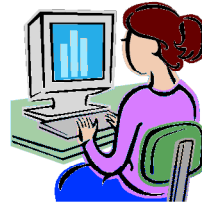
- Number of letters, voice calls and faxes around the globe have reduced.
- 30% of internet users say it has resulted in new business.
- Physical meetings and relationships are becoming scarce.

“The internet has reduced the number of letters, voice calls and faxes around the globe. A total of 30 percent of Internet users in one survey stated that Internet usage had resulted in new business opportunities and 43 percent said that it has increased productivity.” (Fawzy, Mohamed, p. 546-547)

“Internet commerce is about businesses and consumers adopting a new process or methodology in dealing with each other. These processes are in essence supported by electronic interactions that replace close physical presence requirements or other traditional means.” (Fawzy, Mohamed, p. 546-547)

Growth of E-Commerce

- electronic commerce spells the end of geography and borders as industrial organization constructs



A study by the Pew Internet and American Life Project shows that more than 50% of the U.S. population now uses the Internet.

Electronic commerce makes it less costly to identify beneficial transactions across a wider range of potential transactors, it should lead to an increased integration of markets that are currently segmented by high transactions costs across geographical space.

One prominent international business expert asserts that electronic commerce spells the end of geography and borders as industrial organization constructs.

While there are potentially important economic advantages to consumers associated with buying in a global market, the Internet also enhances specific advantages associated with buying "local." Moreover, the impact of electronic commerce varies across the stages of the industry's value chain.

For economists, a global market exists when transactions between buyers and sellers of a product are not directly or indirectly segmented by geographical distance. That is, buyers and sellers in any one physical location transact at essentially the same prices, while incurring essentially the same transactions costs, as buyers and sellers in any other physical location.

Business scholars offer a somewhat expanded description of a global industry. The description emphasizes the competitive interdependencies among domestic industries. Specifically, an industry is globally integrated the more comprehensively are the various value-added activities distributed and coordinated across multiple countries (Makhija, Kim, and Williamson, 1997). In this context, globalization is a continuum

A global industry is one in which there are significant flows of raw materials, components and intermediary products as well as end products across countries. This characteristic is also featured in economic definitions of international economic integration.

The Internet has dramatically reduced the costs of "point to multipoint" communication, making it far easier for brokers and other information providers to supply information to their customers. In addition, the relatively low cost of opening a website has made it easier and less costly for those in possession of information to make that information accessible in one well-known (electronic) location.

Positive Impact of IT

- Provides protection from routers, firewalls, IP strategies, and viruses
- More accessible (Bluetooth)
- Paperless technology
- Assurance technology for stakeholders



Information security provides protection from routers, firewalls, IP strategies, and viruses. Protection is important for both external and internal threats.

Wireless technology is expanding and made technology more accessible. Examples include Bluetooth and different satellite systems.

Paperless technology makes it easier to organize and sort through data. Databases bring structure to any organization and simplify underlying demands from the company.

Assurance applications help in a way that stakeholders and others associated with the company that they can monitor different transactions and other company business.

Negative Impact of IT



- Y2K
- Spam
- Expectations to replying to e-mails have changed, now faster response is expected

In 2000, Y2K scared many people worldwide. The world became so dependant on technology that people were afraid that technology would crash.

Spam makes it inconvenient to filter though your e-mail account.

The expectations of replying to e-mails and work related documents have changed in the sense that you are expected to reply in a quicker manner

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Inter and Intra Organizational Impact of Information technology

- within the same organization
- between suppliers and customers
- formation of technology-partnering alliances

Ahn, H.J., Lee H. (2004). An Agent-Based Dynamic Information Network for Supply Chain Management. *BT Technology Journal*, 22(2), 18-27.



1. Many companies are using Microsoft Net Meeting as a communication tool in business today. The communication can be improved when conferences are held in which there people from all over the world are involved in a meeting.

Teleconferencing can be used along with PowerPoint presentation so that people can better understand the message clearly.

2. Microsoft NetMeeting saves on cost. Many businesses are using Microsoft NetMeeting as a way to have meetings with employees and business partners from all around the world. It is great because it saves companies a lot of money in traveling cost. Companies are saving money and they are more effective with their message because the communication is clearer.

3. Microsoft NetMeeting allows productivity to increase. This is because while there is a meeting going on, managers can suggest solutions and/or plans right on the spot. This allows managers to do what they have to do right away, therefore they do not have to wait weeks or even months for the solution to their problem or the go ahead for the project they had.

4. The use of Microsoft NetMeeting enhances the use of all Microsoft software. During meetings and teleconferencing anyone can make changes to any of the documents that are being used for the meeting. This allows for instant change and allows for the problem to be fixed right away.

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Intra Organizational Impact

- All companies and organizations
- Communicate, transfer and share
- Accenture , Dell, IBM, Gap, GE, Microsoft, Hospitals, etc.

Palmer, Dwayne. (2005). COMMUNICATIONS FOR GLOBALIZATION.
<http://www.facultysenate.gatech.edu/EB2006-062006-M-Attach2wp.htm>


1. With global markets, increasing information technological improvements, and shorter product life cycles, greater emphasis is being placed on supply chain management. According to Hyung Jun Ahn and Habin Lee both who received doctorates from Korea Advanced Institute of Science and Technology, “A supply chain is a value-creating network consisting of suppliers, warehouses, manufacturers, wholesalers, and retailers through which material and products are acquired, transformed, and delivered to consumers in markets” (Ahn, 2004, p.18). A curtail problem in supply chain management is to improve the entire supply chain, not a single companies chain.

2. A critical issue with supply chain management is the bullwhip effect. The bullwhip effect is the enlargement of demand fluctuations as orders move up the supply chain. Issues such as this happen because of certain characteristics. First, supply chains are subject to frequent changes with new buyers, suppliers, and products. Secondly, sharing information among the supply chain is not always possible due to the first characteristic. Finally, controlling production and orders in a supply chain system are in essence somewhat impossible due to the fact that supply chain members are usually independent companies (Ahn, 2004, p.18).

3. Agent-based dynamic information network for supply (ADINS): ADINS is a supply chain that allows autonomous agents to create an information network by only local collaboration and information sharing. Networking allows entities to conduct order and production planning in a timely way with no central controlling entities. This is done by agents being able to observe market demands directly. By using ADINS one is able to reduce the bullwhip effects, reduce inventory expenses, and improve quality at better rates. Figure 1 shows the architecture of an ADINS (Ahn, 2004, p.19).

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Inter Organizational Impact: Between Suppliers and Customers

- Improves manufacturing time and reduces cost
- Dell, Inc. 
- Dick Hunter, vice president of Dell's Americas Manufacturing Operations, "For Dell and our suppliers, information is increasingly replacing inventory, and we are regularly identifying, gathering and sharing new types and levels of data"

Davis, C. (2004). The Dell model. *Supply Chain Europe*, 13(4), 42.

1. Facts about Dell

a. Dell's model of selling directly to the customer has created a legendary method of supply chain management. The company has created a remarkable system of manufacturing more than 50,000 computers per day. However, the company only carries four days' of inventory while their competitors have 20-30 days of inventory in stock. This is a remarkable accomplishment in supply chain management that few companies have mastered (Davis, 2004, p.60).

b. Dell's success

c. Dell Corp. uses what it claims as a supplier report card with every supplier, and tracks their performance against a metrics created and maintained by Dell. The company's supply chain is so excellent that suppliers and vendors are interconnected with Dell. Michael Dell chairman and CEO states, "keep your friends close, and your suppliers closer" (Davis, 2004, p.61).

d. Balance in supply chain management is crucial for Dell and its suppliers. Around 75% of Dell's suppliers have around 8-10 day inventory systems. If that level increases Dell works with suppliers to reduce that inventory in the supply chain. But, Dell also works with suppliers to avoid low levels of inventory. According to Dick Hunter, vice president of Dell's Americas Manufacturing Operations, "For Dell and our suppliers, information is increasingly replacing inventory, and we are regularly identifying, gathering and sharing new types and levels of data"(Davis, 2004, p.61).

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Formation of Technology Partnering Alliances

- IBM, i2, and Ariba run the Worldwide Retail Exchange (WWRE), members include Target, Best Buy, U.S.-based Albertson's, CVS, Gap, Inc., Kmart, Walgreens
- Automobile Companies

IBM. (2006). Solution Partners. <http://www-1.ibm.com/services/us/ebhs/html/why-partners.html>

The B2B (business to business) process is much more complex than the B2C (business to consumer) process that simply involves the streamlining of buying and selling. This is because a chain of transactions involving material suppliers and service providers lies behind every product that reaches the consumer. (Kenjale & Phatak, 2002).

B2B exchanges reduce costs for both buyer and seller, and further cost reductions can come from global partnerships and alliances that standardize industrial practices.

B2B exchanges can also make it possible to enter new global markets at minimal cost and substantially reduce the time required to respond to changes in demand patterns. (Kenjale & Phatak, 2002).

Global partnerships, thanks to B2B and information technology will continue to grow. This will further advance the global economy and make it easier for companies to form strategic alliances and go global.

IBM is a role model of companies that are global and technology-driven.

IBM is a leading company in forming technology-partnering alliances that span the world. IBM has strategic partnerships with dozens of leading companies across the globe to create technology-driven solutions for all kinds of industries.

IBM has partnered with AT&T, and by using AT&T's networking capabilities, they have created e-business Hosting™ Centers to help improve the process of buying and selling over the internet. (IBM 2006.) This will aid both companies and customers.

IBM is an authorized member of the Cisco Powered Network service provider program. Companies using Cisco's networking standards, such as IBM, offer network-design solutions to clients around the world. IBM is Cisco's fastest growing Global Systems Integrator. (IBM 2006).

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