Electronic Commerce

Chapter 1

INTRODUCTION

Objectives

- Three waves of e-commerce
- What is e-commerce?
- E-commerce categories
- Advantages and disadvantages
- Economics and e-commerce
- International nature of e-commerce

Three waves of e-commerce

- First wave: 1995 – 2003
  - e-commerce grew rapidly , called "boom"
  - Followed by a rapid contraction, called "bust" (2000 – 2003)

- Second wave: 2004 – 2009
  - Language translation and currency conversion were two big problems
  - Using internal funds → E-Commerce grows more steadily.
  - People obtain a broadband connection
  - e-mail: used as an integral part of marketing and customer contact strategies.
  - Online advertising.
  - New approaches to the sale and distribution of digital products
  - First-mover advantage strategy was replaced by the smart-follower strategy.

- Third wave: 2010 – 2015

Waves of e-commerce

First wave

- Dominated by U.S. companies

- Most electronic commerce Web sites in English

- Many new companies started with outside investor money

- Slow Internet connections.

- Unstructured e-mail communication with customers

- Reliance on simple forms of online advertising as main revenue source

- Widespread piracy due to ineffective distribution of digital products.

- Rely on first-mover advantage to ensure success in all types of markets and industries

Second waves

- Global enterprises in many countries participating in electronic commerce

- Many electronic commerce Web sites available in multiple languages.

- Established companies funding electronic commerce initiatives with their own capital.

- Rapidly increasing use of broadband technologies for Internet connections

- Customized e-mail strategies are integral to customer contact.

- Use of multiple sophisticated advertising approaches and better integration of electronic commerce with existing business processes and strategies.

- New approaches to the sale and distribution of digital products

- Realize that first-mover advantage leads to success only for some companies in certain specific markets and industries

Waves of e-commerce

E-Commerce characteristic

- *International character*

- *Languages*
- *Funding*
- *Connection technologies*

- *Contact with customers*
- *Advertising and Electronic Commerce Integration*
- *Distribution of digital products*
- *First-Mover advantage*

Third wave

- Emergence of China, India, Brazil, and other countries as major centers of electronic commerce activity.

- English is no longer the dominant language on Web sites worldwide

- Wide variety of funding sources available, including crowdsourcing.

- High bandwidth mobile telephone networks become an additional important connection technology.

- Social networking tools are important additions to e-mail contact

- Increasingly, advertising and marketing strategies are driven by available online communication technologies.

- Sale and distribution of digital products becomes commonplace

- First-mover advantage no longer seen as a key element in electronic commerce initiatives

5

Waves of e-commerce

- *The first wave of e-commerce* began in the 1990s, with the creation of websites of brand manufacturers and retailers like Amazon. At this stage, e-commerce was a novelty.
- *The second wave of e-commerce* began in the aughts, when most consumers routinely used e-commerce.
- *The third wave of e-commerce* began in the 2010s, when retailers, particularly e-commerce retailers, began to substitute their in-house products for brand manufacturers' products, using the consumer information advantage they had over the brand manufacturers.
- *The fourth wave of e-commerce*??? ➔ DISCUSSION

What is e-commerce

- E-commerce: shopping on the World Wide Web

- E-business: includes other activities

- Definition from IBM: the transformation of key business processes through the use of Internet technologies

- Business model: set of processes that combine to achieve a company's primary goal
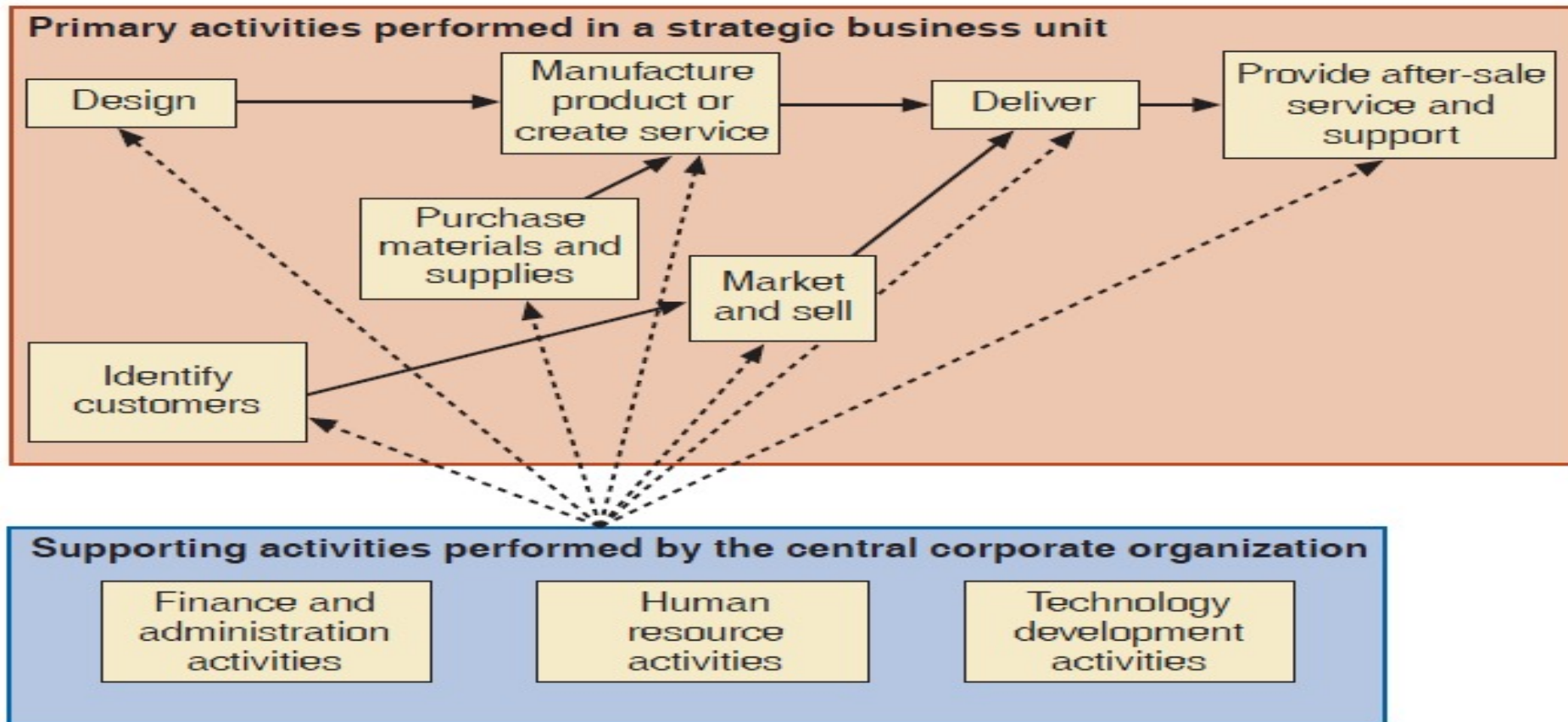
What is e-commerce

- Business process: collection of related activities to produce a specific service or product
- Primary (core) processes: create value directly (purchasing, manufacturing, sales, etc.)
- Supporting processes: support core processes (accounting, recruitment, technical support, etc.)
- Instead of copying business models, a wiser approach is to improve/replace specific business processes
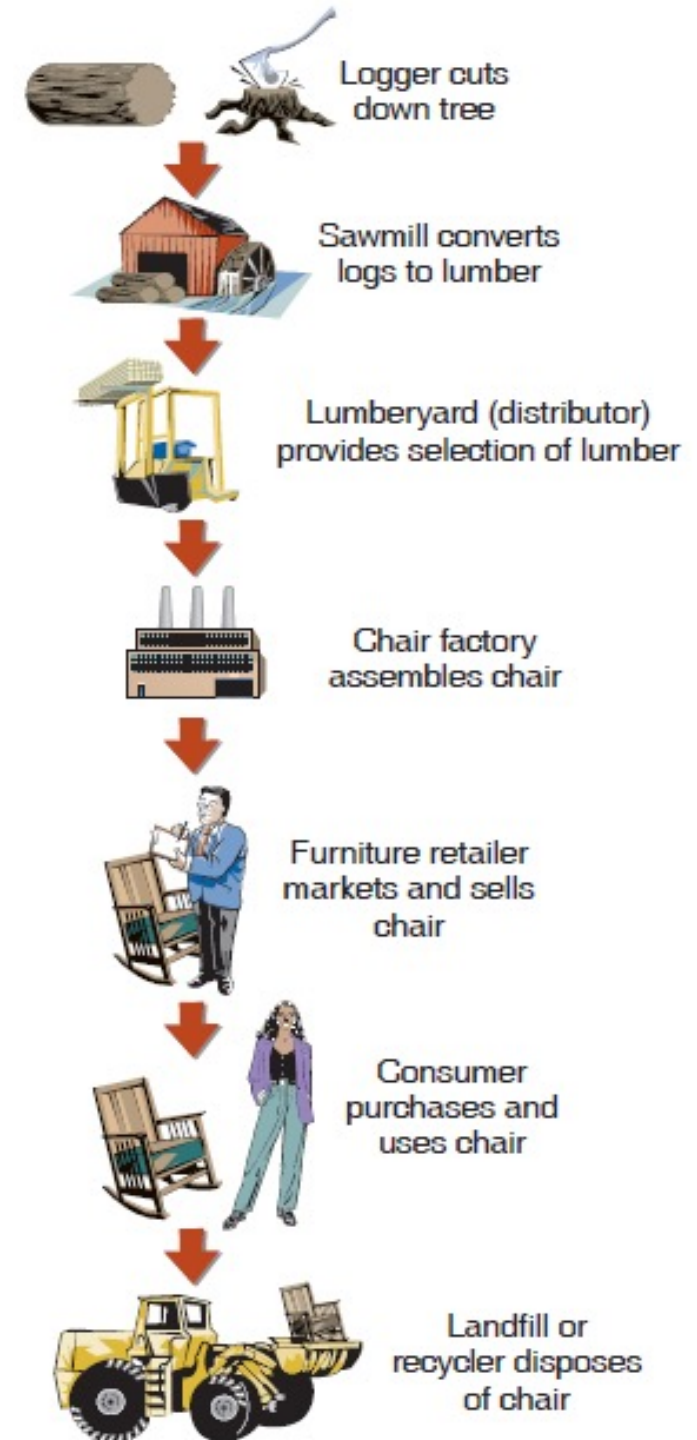
What is e-commerce

- Value chain: a chain of activities for a firm operating in a specific industry

Primary activities performed in a strategic business unit: Design → Manufacture product or create service → Deliver → Provide after-sale service and support. Purchase materials and supplies. Market and sell. Identify customers.

Supporting activities performed by the central corporate organization: Finance and administration activities, Human resource activities, Technology development activities.

What is e-commerce

- Industry value chain: a chain of various processes that are involved in producing goods (and services), starting with raw materials and ending with the delivered product

Logger cuts down tree

Sawmill converts logs to lumber

Lumberyard (distributor) provides selection of lumber

Chair factory assembles chair

Furniture retailer markets and sells chair

Consumer purchases and uses chair

Landfill or recycler disposes of chair

10

What is e-commerce

- SWOT (strengths, weaknesses, opportunities, threats) analysis: Evaluating Business Unit Opportunities

Strengths

- What does the company do well?

- Is the company strong in its market?

- Does the company have a strong sense of purpose and the culture to support that purpose?

Weaknesses

- What does the company do poorly?

- What problems could be avoided?

- Does the company have serious financial liabilities?

Opportunities

- Are industry trends moving upward?

- Do new markets exist for the company's products/services?

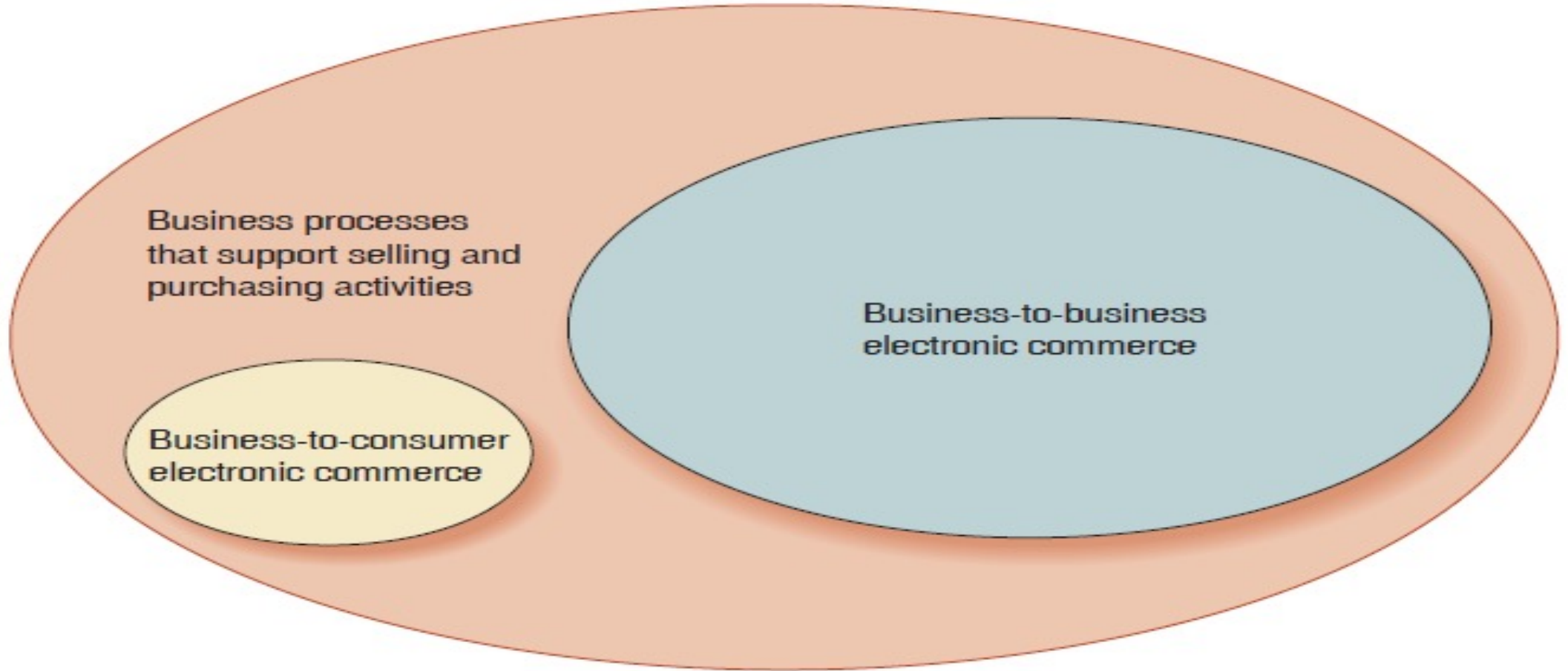- Are there new technologies that the company can exploit?

Threats

- What are competitors doing well?

- What obstacles does the company face?

- Are there troubling changes in the company's business environment (technologies, laws, and regulations)?

E-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. Because one party is selling, and thus acting as a business, this book treats C2C transactions as part of B2C electronic commerce.	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. This book treats B2G transactions as part of B2C electronic commerce.	CA.gov procurement site allows businesses to sell online to the state of California.

12

E-commerce categories

Business processes
that support selling and
purchasing activities

Business-to-business
electronic commerce

Business-to-consumer
electronic commerce

13

Advantages & disadvantages

- Advantages
  - Create virtual community
  - For sellers
    - Increase sales
    - Decrease cost
    - Increase reach and richness
  - For buyers
    - Increase purchasing opportunities
    - Identify new suppliers and business partners
    - Easier negotiating price and delivery terms
    - Increase speed, information exchange accuracy
    - Wider range of choices

Advantages & disadvantages

- Advantages
  - For society
    - Lower costs to issue:
      - Electronic payments of tax refunds
      - Public retirement
      - Welfare support
    - Secure and quick Internet transmission
    - Fraud, theft loss protection
    - Electronic payments easier to audit and monitor
    - Reduced commuter-caused traffic, pollution due to telecommuting
    - Products and services available in remote areas

Advantages & disadvantages

- Disadvantages
  - Not all products & services suitable for e-commerce
  - Technology and software issues
  - Consumers resistant to change
  - Cultural differences
  - Conflicting laws
- These disadvantages will disappear when
  - Advancing of technologies
  - Buyers willing to buy through the Internet

Advantages & disadvantages

• Products/services for e-commerce

| Well Suited to Electronic Commerce	Suited to a Combination of Electronic and Traditional Commerce Strategies	Well Suited to Traditional Commerce
Sale/purchase of books and CDs	Sale/purchase of automobiles	Sale/purchase of impulse items for immediate use
Sale/purchase of goods that have strong brand reputations	Banking and financial services	Low-value transactions (total sale/purchase under $10)
Online delivery of software and digital content, such as music and movies	Roommate-matching services	Sale/purchase of used, unbranded goods
Sale/purchase of travel services	Sale/purchase of residential real estate	
Online shipment tracking	Sale/purchase of high-value jewelry and antiques	
Sale/purchase of investment and insurance products		

17

Economics and e-commerce

- Economics: study of how people allocate scarce resources
- One way people do this is to participate in markets
- Most economists agree that markets are strong and effective mechanisms for allocating scarce resources
- Transaction cost: total cost of a transaction

Economics and e-commerce
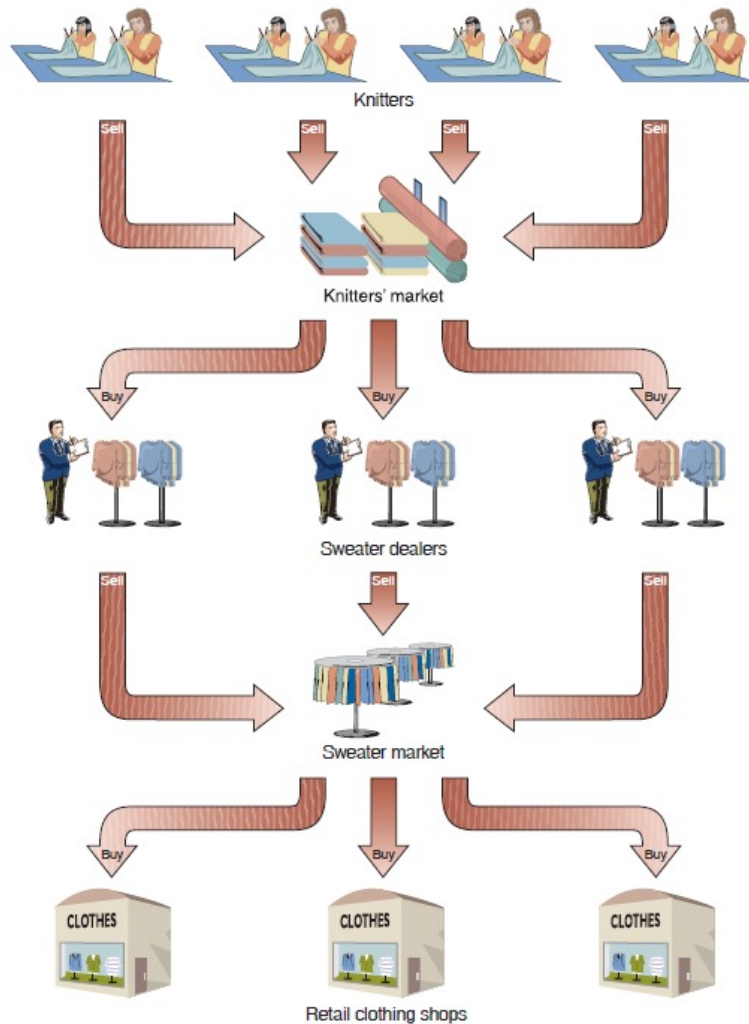
- How companies are formed?
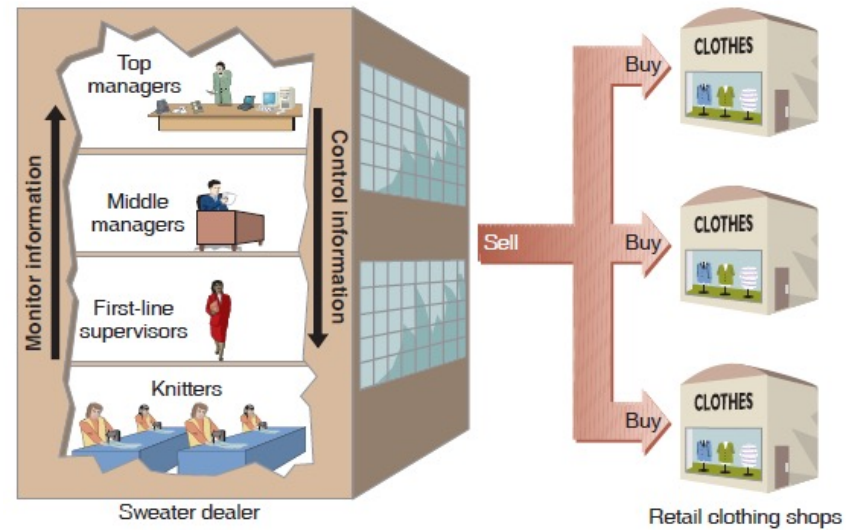
Economics and e-commerce

- Agency cost: the cost of using an agency

- Two components:
  - The costs inherently associated with using an agent
  - The costs of techniques used to mitigate the problems associated with using an agent

- Using e-commerce to reduce transaction cost and agency costs

Economics and e-commerce

- Law of diminishing returns: in all productive processes, adding more of one factor of production, while holding all others constant, will at some point yield lower per-unit returns

- Network effect: more people or organizations participate in a network, the value of the network to each participant increases

- E-commerce can be used to create network effect

International nature

- Internet connects computers worldwide
- When companies use Web to improve business process they automatically operate in global environment
- Key issues
  - Trust

"On the Internet, nobody knows you're a dog."

International nature

- Key issues
  - Languages
  - Culture
  - Government
  - Infrastructure