

Introduction to Information Technology
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Part I



THE ORGANIZATION IN THE DIGITAL ECONOMY

Chapter 1

The IT- Based Organization in the Digital Economy

Chapter Outline

- Doing Business in the Digital Economy
- Business Pressures, Organizational Responses, and IT Support
- Competitive Advantage and Strategic Information Systems
- Strategic Information Systems: Examples
- Why Should you Learn About Information Technology?

Learning Objectives

- Describe The characteristics of the digital economy and e-business.
- Discuss the relationships among business pressures, organizational responses, and information systems.
- Describe strategic information system (SISs) and how information technology helps companies improve their competitive positions.
- Describe Porter's competitive force model
- Describe 12 strategies that companies can use to achieve competitive advantage in their industries.

Doing Business in the Digital Economy

- Concluding business in the digital economy using Web-based systems on the Internet and other electronic networks.

Networked Computing

- **e-business/ e-commerce** the conducting of business functions (e.g., buying and selling goods and services, servicing customers, collaborating with business partners) electronically, in order to enhance an organization's operations.
- The infrastructure for e-business is **network computing**, which connects computers and other electronic devices via telecommunication networks.
- These computers may be connected to the global networked environment, known as the **internet**, or to its counter part within organizations, called an **intranet**, many companies link their intranet to those of their business partners over networks called **extranets**.

Information Technology

- The collection of computing systems used by an organization

Major Capabilities of Information System

- Perform high-speed, high-volume, numerical computation.
- Provide fast, accurate, and inexpensive communication within and between organizations.
- Automate both semiautomatic business processes and manual tasks.
- Store huge amounts of information in an easy-to-access, yet small space.
- Allow quick and inexpensive access to vast amount of information, worldwide.
- Facilitate the interpretation of vast amounts of data
- Enable communication and collaboration anywhere, any time.
- Increase the effectiveness and efficiency of people working in groups in one place or in several locations, anywhere.
- Facilitate work in hazardous environment .

Digital Economy

- An economy based on digital technologies, including communication networks (the Internet , intranets, and extranets), computers, software, and other related technologies; also sometimes called the Internet economy, the new economy, or the Web economy .

Digital networking and communications infrastructures includes:

- A vast array of digitizable product -data bases, news and information, books, magazines, TV and radio programming , movies, electronic games, musical CDs, and software- which are delivered over the digital infrastructure any time, anywhere in the world
- Consumers and firm conducting financial transaction digitally-through digital currencies or financial tokens carried via networked computers and mobile devices
- Physical goods such as home appliances and automobiles that are embedded with microprocessors and networking capabilities.

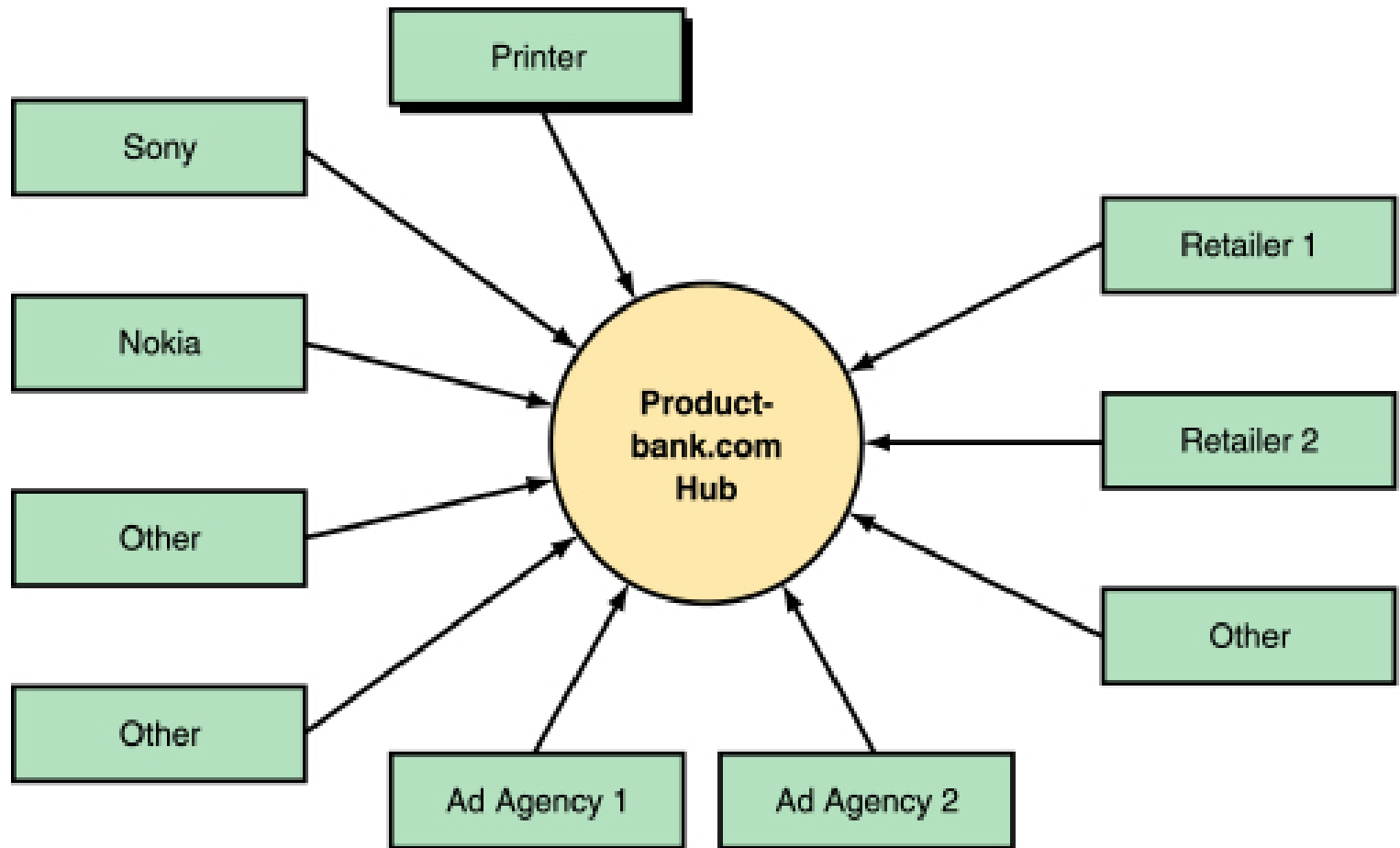
The New Economy VS. The Old Economy

Example	Old	New
Buying and selling text book	Visit the bookstore	Visit web site for publishers and retailers
Registering for classes	Walk around campus to Departments, Registrar's office, etc.	Access campus web site
Photography	Buy film, use camera, take picture, take it for processing	Use digital camera
Paying for Gasoline	Fill up your car, go inside, pay cash or credit card	Use speed pass token wave over the sensor and go
Paying the Transportation	Pay cash, metal tokens	Metro cards electronic cards
Paying for goods	Visit store, take the item, pay , go	Use self – service kiosks
Supplying commercial photos	Use newspapers, paper, catalog or on line	Use hub-like supply chain with digitized picture

Business Model in the Digital Economy

- The Internet is revolutionizing the economic, societal, and technological foundations of the old economy. Organizations are developing new models for business, the economy, and government

Changing a linear supply chain to a hub



Business Model

- A method of doing business by which a company can generate revenue to sustain itself; spells out how the company adds value to its products or services.

Five Representative Business Models of the Digital Age.

- ◆ Name- your- Own- Price: allow the buyer to state a price he or she is willing to pay for a specific product or service.
- ◆ Bidding Using Reverse Auctions: Via a request for quote, the buyer indicates a desire to receive bids on a particular item, and would-be sellers bid on the job

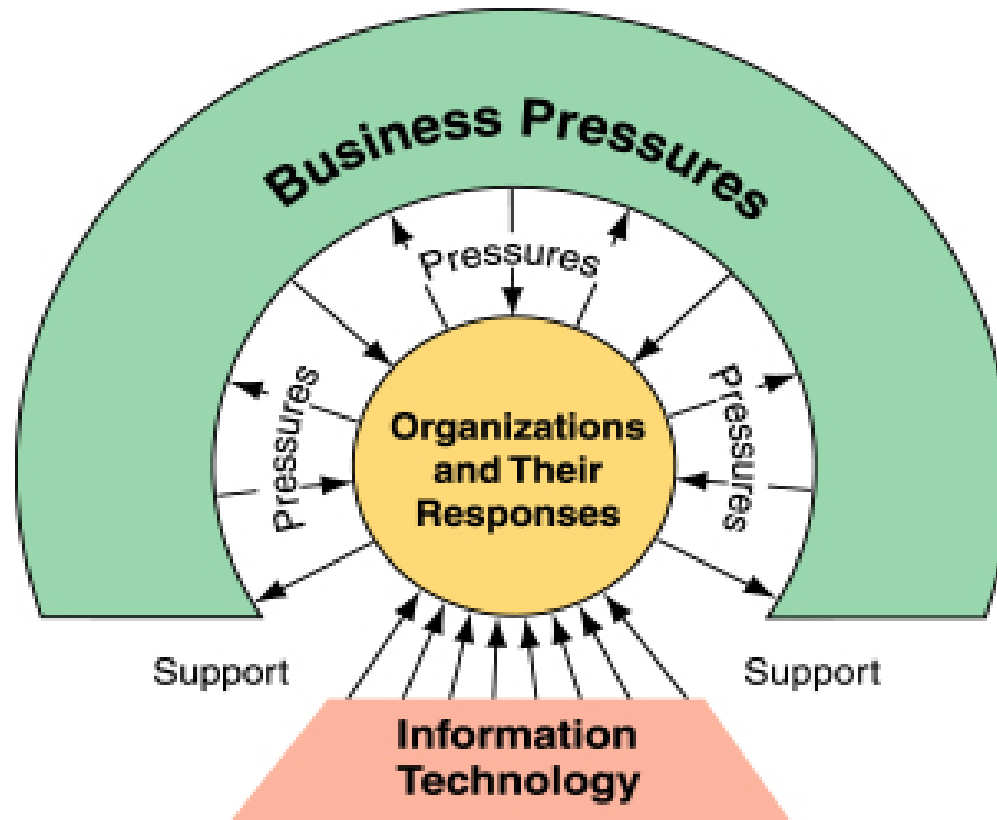
Five Representative Models cont...

- ◆ Affiliate Marketing: Marketing partners place a banner ad for a company on their Web site
- ◆ Group Purchasing: The purchase orders of many buyers are aggregated, a small business, or even an individual, can get a discount
- ◆ E-Marketplace: Markets in which buyers and sellers negotiate online

1-2 Business Pressures, Organizational Responses, and IT Support

- * **Business Pressure** , The business environment is the combination of social, legal, economic, physical, and political factors that affect business activities. Significant changes in any of these factor are likely to create business pressure on organization .
- * Three Types of business pressures that organizations face- market, technology, and societal pressures .

IT support for organizational responses



The Three Types of Business Pressure

Market Pressure:

- The global economy and strong competition
- The changing nature of the workforce
- Powerful customers.

Technology Pressures:

- Technological Innovation and Obsolescence
- Information Overload.

Societal Pressure:

- Social responsibility
- Government regulation and Deregulation
- Spending for social programs
- Protection Against Terrorist Attacks.
- Ethical Issues

Customer Relationship Management

- An enterprise wide effort to acquire and retain customers, often supported by IT

Build- to- order

- The strategy of producing customized products and services.

Mass customization

- ➔ Production process in which items are produced in a large quantity but are customized to fit the desires of each customer.

Virtual corporation

- ➔ A business that operates through telecommunications networks, usually without a permanent headquarters, to produce a product or service.

1.3 Competitive advantage and SIS

- Competitive Advantage: An advantage over competitors in some measure such as cost, quality, or speed, leads to control of a market and to larger- than average profits.

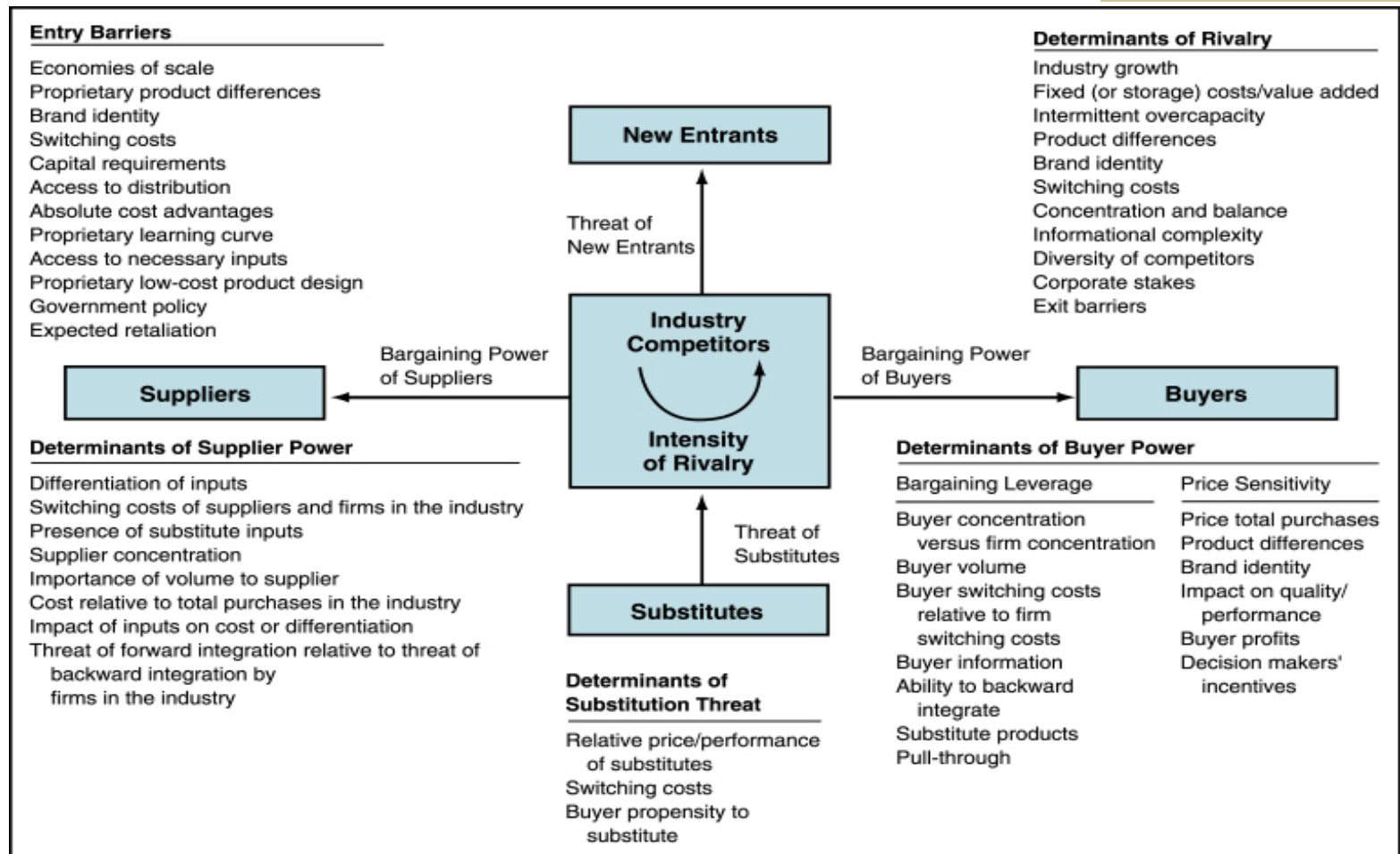
Strategic Information Systems (SISs)

- ➔ Systems that help an organization gain a competitive advantage through their contribution to the strategic goals of an organization and /or their ability to significantly increase performance and productivity.

Competitive forces model

- ➔ A business framework, devised by Michael Porter, for analyzing competitiveness by reorganization five major forces that could endanger a company's position.

Porter's five forces Model



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