



Chapter 3

Achieving Competitive Advantage with Information Systems



Essentials of Business Information Systems

Chapter 3 Achieving Competitive Advantage with Information Systems

STUDENT OBJECTIVES

- **Demonstrate how Porter's competitive forces model helps companies develop competitive strategies using information systems.**
- **Demonstrate how the value chain and value web models help businesses identify opportunities for strategic information systems applications.**
- **Assess how information systems help businesses use synergies, core competencies, and network-based strategies to achieve competitive advantage.**



Essentials of Business Information Systems

Chapter 3 Achieving Competitive Advantage with Information Systems

STUDENT OBJECTIVES (Continued)

- **Assess how competing on a global scale and promoting quality enhance competitive advantage.**
- **Evaluate the role of business process reengineering (BPR) in enhancing competitiveness.**



Essentials of Business Information Systems

Chapter 3 Achieving Competitive Advantage with Information Systems

Amazon.com: An Internet Giant Fine-Tunes Its Strategy

- **Problem:** Taking advantage of opportunities from new technology, staying ahead of power competitors.
- **Solutions:** Set up warehouse and distribution chain to sell on the Web and reduce costs.
- **Partnerships with other businesses, online storefront, and Web-based digital services** provide e-commerce services to other businesses and increase sales.
- Demonstrates IT's role in innovating and refining a business model.
- Illustrates digital technology's role in gaining and maintaining a competitive advantage.



Essentials of Business Information Systems

Chapter 3 Achieving Competitive Advantage with Information Systems

Amazon.com: An Internet Giant Fine-Tunes Its Strategy

Interactive Session: Amazon.com

- What other Web sites have you come across that utilize new technology to gain a competitive advantage in their particular industries?
- Compare and contrast the business strategy of one of these sites to Amazon's strategy.
- How does the site use digital technology to sustain a competitive advantage?
- How innovative would you say Amazon is in comparison to eBay, Yahoo!, and Google?



Essentials of Business Information Systems

Chapter 3 Achieving Competitive Advantage with Information Systems

Using Information Systems to Achieve Competitive Advantage

Types of Competitive Advantage

- **Barriers to entry that restrict supply**
- **Demand control**
- **Economies of scale**
- **Process efficiency**



Essentials of Business Information Systems

Chapter 3 Achieving Competitive Advantage with Information Systems

Using Information Systems to Achieve Competitive Advantage

Porter's Competitive Forces Model

- **Traditional competitors**
- **New market entrants**
- **Substitute products and services**
- **Customers**
- **Suppliers**

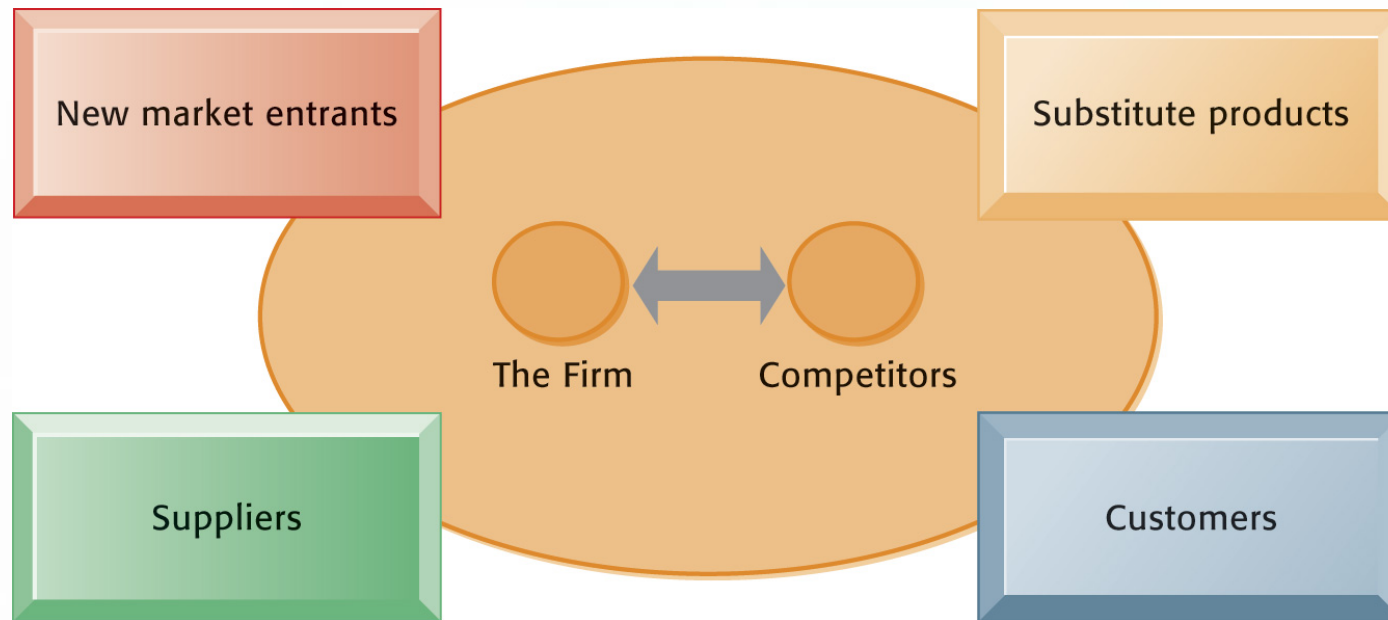


Essentials of Business Information Systems

Chapter 3 Achieving Competitive Advantage with Information Systems

Using Information Systems to Achieve Competitive Advantage

Porter's Competitive Forces Model



In Porter's competitive forces model, the strategic position of the firm and its strategies are determined not only by competition with its traditional direct competitors but also by four forces in the industry's environment: new market entrants, substitute products, customers, and suppliers.

Figure 3-1



Essentials of Business Information Systems

Chapter 3 Achieving Competitive Advantage with Information Systems

Using Information Systems to Achieve Competitive Advantage

Information System Strategies for Dealing with Competitive Forces

- **Low-cost leadership**
- **Product differentiation**
- **Focus on market niche**
- **Strengthen customer and supplier intimacy**



Essentials of Business Information Systems

Chapter 3 Achieving Competitive Advantage with Information Systems

Using Information Systems to Achieve Competitive Advantage

Cemex Turns a Commodity into a Global Brand

- **Read the Focus on Technology and then discuss the following questions:**
 - **What is Cemex's business strategy?**
 - **What challenges and problems does the company face?**
 - **What role do information systems play in Cemex's strategy and business model?**
 - **How much do information systems help Cemex deal with its problems and compete in the industry?**



Essentials of Business Information Systems

Chapter 3 Achieving Competitive Advantage with Information Systems

Using Information Systems to Achieve Competitive Advantage

Interactive Session: Cemex

- **Discuss the role that the competitive forces model played in the transformation of Cemex.**
- **Discuss the concepts of market niche, customer intimacy, and supplier intimacy as they relate to Cemex's growth with information systems.**
- **What business objectives does Cemex's Web site (www.cemex.com) serve?**



Essentials of Business Information Systems

Chapter 3 Achieving Competitive Advantage with Information Systems

Using Information Systems to Achieve Competitive Advantage

Southwest Airlines: New Strategy, New Systems

- Read the Focus on Organizations and then discuss the following questions:
 - What is Southwest Airlines' business strategy?
 - How is Southwest dealing with the current problems plaguing the airline industry?
 - What role do information systems play in Southwest's strategy and business model?
 - How much will information systems help Southwest deal with its problems and compete in the industry?



Essentials of Business Information Systems

Chapter 3 Achieving Competitive Advantage with Information Systems

Using Information Systems to Achieve Competitive Advantage

The Internet's Impact on Competitive Advantage

- **Enables new products and services**
- **Transforms industries**
- **Increases bargaining power of customers and suppliers**
- **Intensifies competitive rivalry**
- **Creates new opportunities for building brands and large customer bases**



Essentials of Business Information Systems

Chapter 3 Achieving Competitive Advantage with Information Systems

Using Information Systems to Achieve Competitive Advantage

The Business Value Chain Model

- Highlights specific activities in a business where competitive strategies can best be applied and where information systems are likely to have a strategic impact
 - Primary activities
 - Support activities
 - Benchmarking
 - Best practices

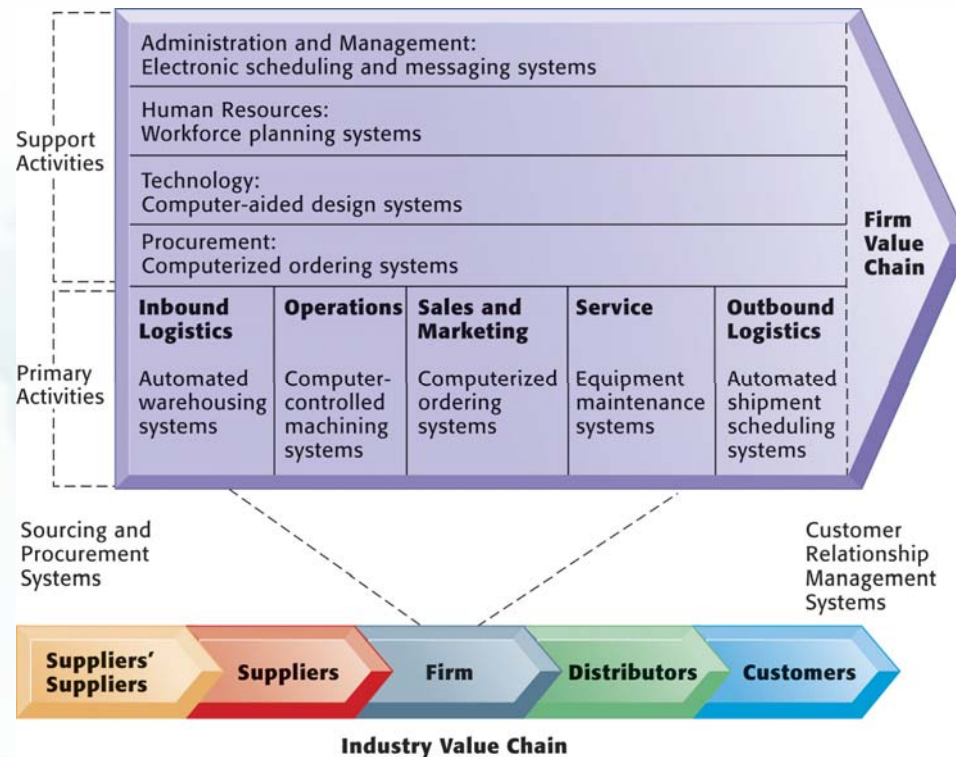


Essentials of Business Information Systems

Chapter 3 Achieving Competitive Advantage with Information Systems

Using Information Systems to Achieve Competitive Advantage

The Value Chain Model



This figure provides examples of systems for both primary and support activities of a firm and of its value partners that would add a margin of value to a firm's products or services.

Figure 3-2



Essentials of Business Information Systems

Chapter 3 Achieving Competitive Advantage with Information Systems

Using Information Systems to Achieve Competitive Advantage

Extending the Value Chain: The Value Web

- A firm's value chain is linked to the value chains of its suppliers, distributors, and customers
- A value web is a collection of independent firms that use information technology to coordinate their value chains to produce a product collectively
- Value webs are flexible and adapt to changes in supply and demand

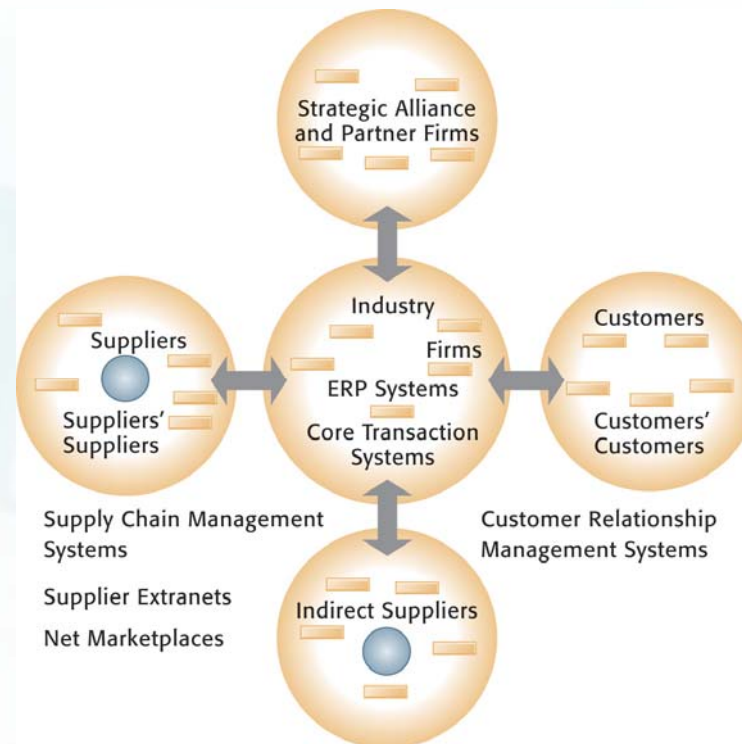


Essentials of Business Information Systems

Chapter 3 Achieving Competitive Advantage with Information Systems

Using Information Systems to Achieve Competitive Advantage

The Value Web



The value web is a networked system that can synchronize the value chains of business partners within an industry to respond rapidly to changes in supply and demand.

Figure 3-3



Essentials of Business Information Systems

Chapter 3 Achieving Competitive Advantage with Information Systems

Using Information Systems to Achieve Competitive Advantage

Synergies, Core Competencies, and Network-Based Strategies

- **Synergies**
 - Information systems tie together disparate units so they act as a whole
- **Enhancing core competencies**
- **Network-based strategies**
 - Network economics
 - Virtual company



Essentials of Business Information Systems

Chapter 3 Achieving Competitive Advantage with Information Systems

Competing on a Global Scale

Globalization Opportunities

- Firms that sell products on a global scale reach a much larger market
- Firms that produce on a global scale achieve extraordinary savings in labor costs
 - The Internet and globalization



Essentials of Business Information Systems

Chapter 3 Achieving Competitive Advantage with Information Systems

Competing on a Global Scale

Global Business and System Strategies

- **Scale economies and resource cost reduction**
- **Higher utilization rates, fixed capital costs, and lower cost per unit of production**
- **Speeding costs to market**
- **Transnational business organizations**



Essentials of Business Information Systems

Chapter 3 Achieving Competitive Advantage with Information Systems

Competing on Quality and Design

What Is Quality?

- **For the producer: conformance to specifications and absence of variation from specs**
- **For the customer: physical quality, quality of service, psychological quality**
- **Total quality management (TCM)**
- **Six sigma**



Essentials of Business Information Systems

Chapter 3 Achieving Competitive Advantage with Information Systems

Competing on Quality and Design

How Information Systems Improve Quality

- **Simplify the product and the production process**
- **Benchmarking**
- **Use customer demand to improve products and services**
- **Reduce cycle time**
- **Improve design quality and precision**
- **Improve production precision and tighten production tolerances**



Essentials of Business Information Systems

Chapter 3 Achieving Competitive Advantage with Information Systems

Competing on Business Processes

Business Process Reengineering

- **Tasks are streamlined to eliminate repetitive and redundant work**
- **Mortgage banks have been great beneficiaries of BPR, achieving remarkable leaps forward in efficiency**
- **Workflow management facilitates streamlining tasks**



Essentials of Business Information Systems

Chapter 3 Achieving Competitive Advantage with Information Systems

Competing on Business Processes

Steps in Effective Reengineering

- **Understanding what business processes need improvement**
- **Understanding how the improvements will help the firm execute its strategy**
- **Understanding and measuring the performance of existing processes**
- **Managing change**