### Lecture 4 of MIS

<table>
<thead>
<tr>
<th></th>
<th>2</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>教学环境</td>
<td></td>
<td>多媒体教室</td>
</tr>
<tr>
<td></td>
<td>1. Identify and describe important features of organizations that managers need to know about in order to build and use information systems successfully.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Evaluate the impact of information systems on organizations.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Access how information systems support the activities of managers.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. Analyze how information systems support various business strategies for competitive advantage.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.1. Organizations and Information Systems</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.2. How Information Systems Impact Organizations and Business Firms</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Economic Impacts</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Organizational and Behavioral Impacts</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- The Internet and Organizations</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.4. Information Systems and Business Strategy</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Business-Level Strategy: The Value Chain Model</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Competitive Forces and Network Economics</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Business strategy, Chief information officer (CIO)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Competitive forces model, End users, Focused differentiation, Information systems department, Information systems managers</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mass customization, Network economics, Organization</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Organizational culture, Primary activities, Product differentiation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Programmers, Support activities, Switching costs, Virtual organization</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Systems analysts, Transaction cost theory, Value chain model, Value web</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Section 3.1: Organizations and Information Systems.**

This section introduces students to both the technical and behavioral definitions of an organization, suggests that information technology and organizations have a complex two-way relationship, discusses common features to all organizations, and identifies the unique features of organizations. It is critical for the rest of the course that students understand what an organization is.

(1) Organization of the IS Function

IS department who are responsible for IT services, Members of the IS department:

- Programmers
- System analysts
- Project managers
- CIO
- Database administrators
- Network administrators
- Chief information officer
- End users

**Section 3.2: How Information Systems Impact Organizations and Business Firms.**
This section discusses information technology infrastructure and information technology services, how information systems affect organizations, and the Internet and organizations.

(1) Economic Impacts
   - IS/IT enables firms to lower their transaction costs and increase revenues with fewer employees (transaction cost theory)
   - Agency theory suggests that IS/IT enables firms to reduce management costs and increase revenues

(2) Organizational and Behavioral Impacts
   IS/IT has moved decision-making to lower levels of management and managers make decisions faster because information is readily available

(3) The Internet and Organizations
   - The Internet increases the accessibility, storage, distribution of information and knowledge for business firms.
   - The Internet lowers the transaction and agency costs of firms.
   - Businesses are rapidly rebuilding their key business processes based on Internet technology.

Section 3.4: Information Systems and Business Strategy.
Section 3.4 is one of the most critical sections in the text because it actually defines strategy when it defines strategic information systems. Understanding business strategy and how information systems can aid employees in making far-reaching and deep-rooted decisions is critical to the long-range success of any corporation. “At the business level of strategy, the key question is, ‘How can we compete effectively in this particular market?’”

(1) Business strategy determines:
   - The products and services a firm produces
   - The industries in which the firm competes
   - Competitors, suppliers, and customers of the firm
   - Long-term goals of the firm

(2) IS can contribute to strategic objectives:
   - Operational excellence
   - New products, services, and business models
   - Customer and supplier intimacy
   - Improved decision making

(3) Porter’s Competitive Forces Model:

(4) Information system strategies for dealing with competitive forces:
- Basic strategy: Align IT with business objectives
- Product differentiation involves developing new and unique products and services not easily duplicated by competitors
- Becoming the low-cost producer
- Focused differentiation
- Strengthen customer and supplier intimacy

(5) Porter’s Value Chain Model:
The value chain model looks at a business in terms of a set of primary and support activities that add value to the firm’s products or services.
VC model can be used to determine where information systems have the most impact to effect the competitive position of the firm
Firm gains a competitive advantage when it provides the product or service with more value or the same value at a lower price

![Value Chain Model Diagram](image)

(6) Primary Activities of the VC Model
Inbound logistics - receiving and storing of materials
- Wal-Mart’s continuous replenishment system
- Stockless inventory systems

Operations:
- computer controlled machinery used by Gillette for producing razor blades

Outbound logistics - storing and distributing the product
- airline reservation system
- automated shipping scheduling systems

Administration and management
- voice mail and e-mail, intranets

Human resources
- employee skills database, systems that facilitate compliance with government regulations

Technology development - improving products and the production process
- oil company uses infrared data gathered by satellite to search for oil deposits

| 重点 | 信息系统的战略价值, 波特模型, 价值链 |
| 难点 | 价值链 |
| 习题 | Exercise - chapter 3 |
| 课后阅读材料 | Google getting under everyone's skin [http://www.informationweek.com/showArticle.jhtml;articleID=170702056] |