كلية المنصور الجامعة

Al – Mansour University College

Computer Science and Information System Department

4th Stage / Information System

Course 1

Management Information System

Lecture_07

Organizations and Information Systems

By

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4.1 Organizations and Information Systems

- Information systems are developing manages to serve the interests of the business firm
- The interaction between information technology and organizations is influenced by many mediating factors including the organization structure, business processes, politics, culture, surrounding environment, and management decisions.

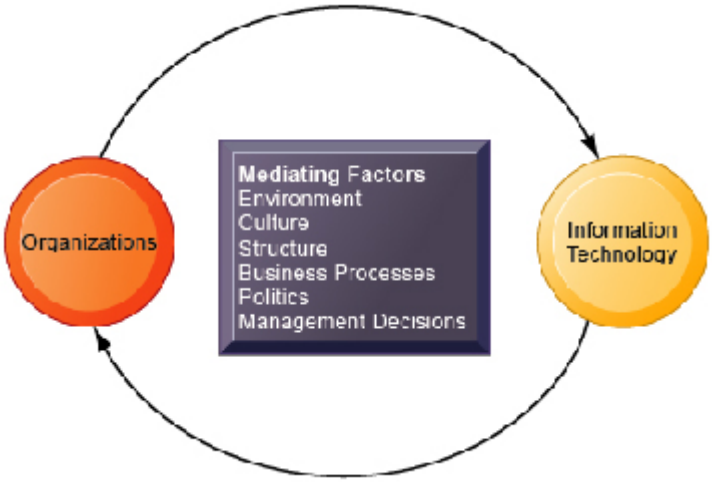


Figure 4.1: Organizations and Information Systems

The two-way relationship between organizations and information technology This complex two-way relationship is mediated by many factors, not the least of which are the decisions made—or not made—by managers. Other factors mediating the relationship include the organizational culture, structure, politics, business processes, and environment.

From a technical view, an organization is a formal, legal, social structure that processes resources, or inputs, to produce outputs. The firm is seen as infinitely malleable, with capital and labor substituting for each other quite easily.as shown in figure (3.2).

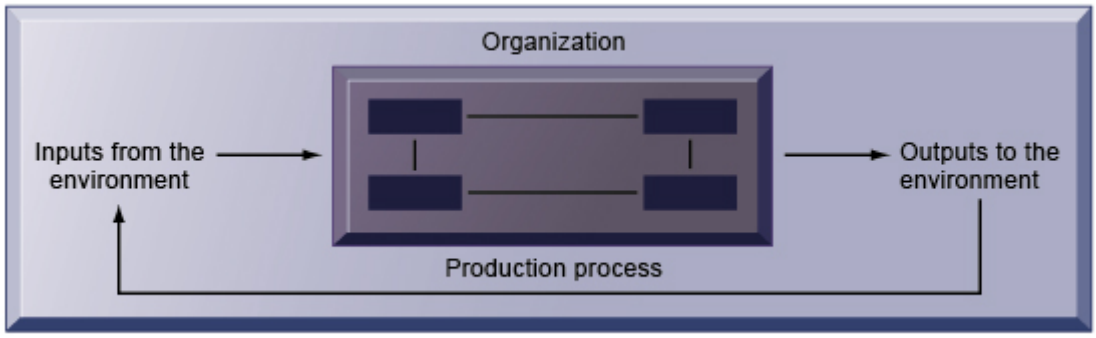


Figure (4.2) : The Technical Microeconomic Definition Of The Organization

A behavioral definition of an organization is that it is a collection of rights, privileges, obligations, and responsibilities that is balanced over time through conflict and conflict resolution. This definition suggests that building new information systems or rebuilding old ones involves much more than a technical rearrangement of machines or workers. Technological change requires changes in who owns and controls information, who has the right to access and update that information, and who makes decisions about whom, when, and how, as shown in figure (4.3).

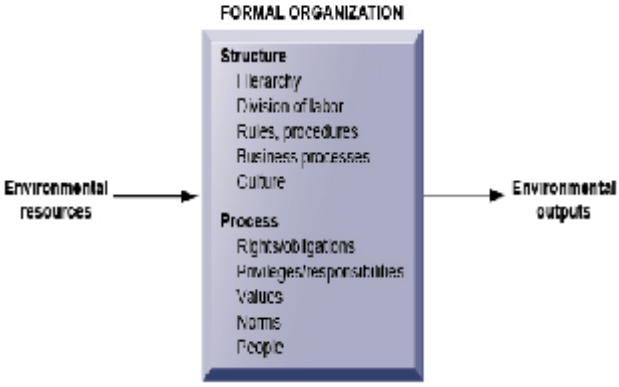


Figure (4.3) : The Behavioral View Of Organizations

4.2 What is an organization?

- An organization is a stable formal social structure that takes resources from the environment and processes them to produce outputs
- Organizations are formal legal entities with internal rules and procedures that must abide by laws
- Organizations are also social structure so:-
  - Capital labor are primary production factors provided by the environment.
  - The organization transforms these inputs into products and services in a production function .
  - The products and services are consumed by environments in return for supply inputs.
- The firm is seen as infinitely malleable, with capital and labor substituting for each other quite easily.

Every Organization has 3 parts:

1. people:(workers, supervisors, consultants, engineers, superintendents, etc.)
2. Tasks: the operations (paint, fix, print, compress, etc.)
3. Management: Planning, Organizing, leading, controlling the performance of people engaged in the tasks

4.3 Features of Organizations

- Organization serene specialist and a hierarchy of authority in which everyone is accountable to someone and authority is limited to specific actions governed by abstract rules or procedures
- The organization is devoted to the principle of deficiency: maximizing output using limited inputs.
- Other features of organizations include their business processes, organizational structure, organizational politics, surrounding environment, structure, goals, constituencies, and leadership styles.

4.4 Routines and business processes

- Routines, sometimes called standard operating procedures, are precise rules, procedures and practices that have been developed to cope with virtually all expected situations
- As employees learn these routines, they become highly productive and efficient, and the firm is able to reduce its costs over time as deficiency increases
- Business processes are collections of routines.
- A collection of business processes make a business firm.

4.5 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.

4.6 Information Systems and Business Strategy

This section 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, the key question is, 'How can we compete effectively in this particular market?'" decisions is critical to the long-range success of any corporation. "At the business level of strategy :-

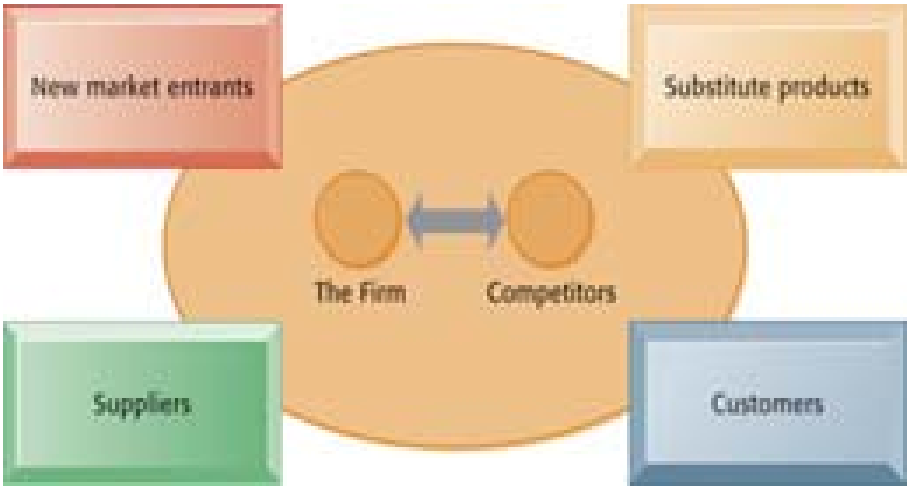
(1) Business strategy determines:

- 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.

(5) 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