

## **INFORMATION MANAGEMENT AND DECISION-MAKING THROUGH ERP SYSTEMS**

**\* Bahareh Asadollahi Esfahani<sup>1</sup>, Elham Jalali Jalalabadi<sup>2</sup>, Samira Fazel<sup>3</sup>, Mozghan Jalali Jalalabadi<sup>4</sup>**

<sup>1</sup> Department of Management, Najafabad Branch, Islamic Azad University Najafabad, Iran

<sup>2</sup> Department of Management, Najafabad Branch, Islamic Azad University Najafabad, Iran

<sup>3</sup> Department of Management, Najafabad Branch, Islamic Azad University Najafabad, Iran

<sup>4</sup> Department of Management, Najafabad Branch, Islamic Azad University Najafabad, Iran

*\*Author for Correspondence*

### **ABSTRACT**

Today, companies need more information and communications to reduce achieving costs to resources and time diversity and also the quality of resources. In other words, Organizations are required to develop an integrated information system. Enterprise resource planning systems are considered a help to flourish the companies' capabilities through the integration and management of business processes. This research examines the information management and decision-making process with the help of enterprise resource planning systems.

**Keywords:** *Management information System (MIS), Enterprise Resource Planning systems (ERP), decision-making organization*

### **INTRODUCTION**

Today, Organizations work and compete in information age, and information has become a key source of most organizations. Indeed, the competitive basis has changed from tangible information to intangible information. Today's Software movement and the rapid change in the field of Management Sciences and also its impact on Accounting and reporting to Capitalists have forced the responsible people to find solutions to quickly move toward the development. (Khajavi and others, 2010) In this regard, the Decisions are taken by the director, will have a direct impact on movement towards the development. Therefore, the availability of appropriate information (accurate, timely and relevant) can assist management in this important issue. In addition, given that today's economic relations between business units is very complex and competitive, the viability of a business unit is affected by the having the information and for this reason, the question becomes more important. Previously, obtaining Proper and timely information in different companies was very costly and difficult so that the management and accounting sciences could achieve their organizational goals by acquiring the mechanized systems. In fact, since the data collection with traditional methods is impossible for large enterprises, these companies have turned to information systems. Today, we face the terms such as the explosion of information and information anarchy, information systems are considered as a way to escape such issues. However, organizations need information systems that are appropriate to their needs and structure. With mentioning this issue, management must seek to use automated information system and the proper use of these systems is very important and necessary due to the costs of controlling mechanized information systems by Companies and business units. In addition, before using this system, it should be noted that whether the information systems are used properly or not?

In fact, it should be considered that the system of implementation stage is effectively done. An efficient management is possible with the increase of useful and accurate information. Information and communications technology plays an important role with the aim of enhancing the business performance in the areas. Enterprise resource planning systems cover the business management in a shared information system by integrating basic functions such as production, finance, marketing, Organizational resource management, and business management (Matende, 2013).

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First, the systems create Compatibility between data collection in organizations, process , analysis and compliant decisions and provide Planning functions and control, on the other hand the system has an important role to increase the effectiveness of Management performance by providing the required information for planning and process(Bensghir, 1996). The strategic role of information systems includes the use of information systems and technology to develop products, services and Business competencies to achieve competitive advantage (Obrein, 1997). Most enterprise resource planning systems are proffered as robust information systems on management decision-making processes. Because it facilitates the transfer of information to different levels of management in specific situations whenever possible and that is somehow an assistant for managers (Chen, 2012).

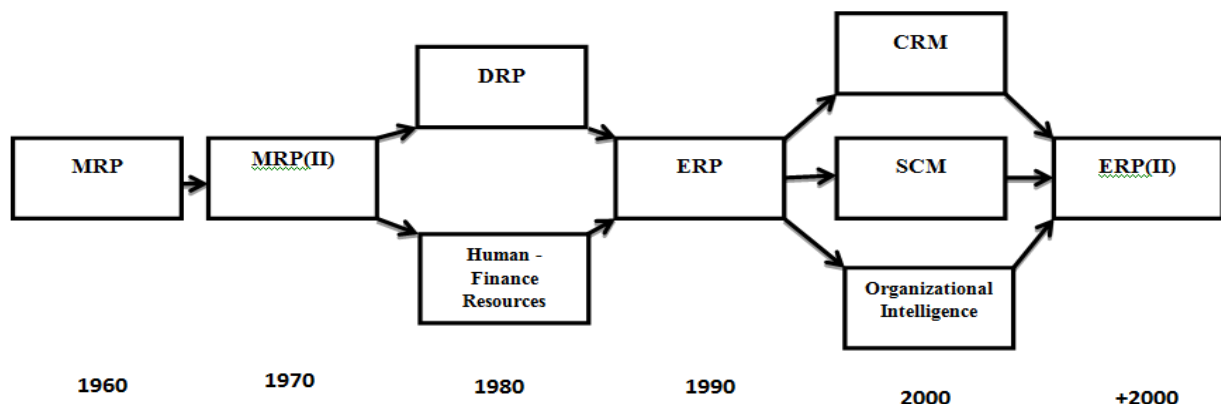
**INFORMATION MANAGEMENT SYSTEM**

Management Information Systems (MIS) is the application of information technology in support of business operations, because the business is transforming from day to day and some people with the power of high resolution and wide viewing angle and business backgrounds are needed to flourish the Business processes. They are required to analyze an organization's information needs and then try to design a computer-based management system in order to meet the analyzed requirements and finally navigate the implementation and operational processes of the designed system. (Ucakturk et al, 2013)

In order to plan and develop an information system that meets the user needs, an MIS expert must be familiar with the organizational structure, business goals, Business operations (including procedures and information rotation between processes) and how to bring an Effective communication with users and also must know how to design a system that covers the user's activities (Trivellas et al, 2013). Management information systems and software engineering are somewhat similar, especially in terms of their concern about the use of computers to solve problems. But there are significant differences between the two fields ( Mohandesi, 2007)

**ENTERPRISE RESOURCE PLANNING SYSTEMS**

Advanced information and communication technologies are an important part of business in today's competitive environment. Rapid changes in information technology have forced the organizations to focus on the use of systems based on complex technology and Information technology and enterprise resource planning system is one of them. Process of ERP development until today is shown in the following figure:



**Figure 1: The Development of Corporate Planning System (Guleryuz, 2007)**

Enterprise Resource Planning System is a comprehensive system that attempts to integrate all departments and functions of an organization with The use of a single computer system that can meet the specific needs and special sections (Matende et al, 2013). This enables the share of information and

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communication of different parts with each other using computer software by a single database. This software is composed of a number of software modules and each one is responsible for duties of the Company. Most software of enterprise resource planning systems are flexible enough to enable the buyer companies to install and use a number (or all) of the modules. As an example, the buyer company is able to install and use the human resources modules of the software package. (Kolmonz and others, 2005).

Software suppliers of enterprise resource planning systems are faced with new challenges such as the internet in the design of their software and are forced to design software packages that allow them to run on the Internet. This position provides an opportunity in which the enterprise resource planning systems, that are currently considered as a local software in the organization, have a close relationship with other systems such as customer relationship management and supply chain management and v Enterprise resource planning systems are actually operating information technology systems that enable the management to have enough data for analysis of the company's goals.ERP brings the entire organization under its control by supervising the materials, orders, planning and other key information for management. (ZareMehrerdi, 2010). Enterprise resource planning system can be defined as integrated software that has components or modules for planning, production, sales, marketing, distribution, accounting, human resources management, project management, inventory management, service management and maintenance, transportation management and electronic commerce. Enterprise resource planning system architecture is such that provides the integrity and completeness of the information provided and the smooth flow of information between different parts of the organization. (Matende et al, 2013.) In general it can be said that the enterprise resource planning system and its software have dimensions that are displayed in Kolmonz model (Figure 2).

The aim of enterprise resource planning systems

The purpose of an enterprise resource planning system is to improve and accelerate the internal processes of the business and to achieve this, re-engineering the organization's processes is needed.

In general, the main aims of enterprise resource planning systems can be summarized as:

- Creating the data stream to the aim of decision-making by managers at different levels
- Efficient use of the software's parts
- Information control + Storage + Accounting + Manpower + distribution ...
- Helping to realize the plans in the anticipated timing
- High Formability
- Composed of integrated parts (Heidari and others, 2005)



Figure 2: Organization Planning System (Klemonz and others, 2005)

### Enterprise Resource Planning System Software

The main core of any enterprise resource planning system is its software section. Enterprise resource planning systems software is based on the applied sub-programs. Each of the applied sub-programs

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simulates the operational activities of the organization. The common sub-programs of enterprise resource planning systems software cover the production management, Raw material purchasing, inventory control, order tracking and sending materials to the manufacturing units. (Kolmonz and others, 2005).

### **DECISION MAKING**

In the stage of achieving the planned targets, many situations, including changes and problems within and outside the organization and etc. can occur. In these circumstances an organization strives to minimize losses and maximize profits for the management of these conditions. In order to deal with decision-making situations in management levels, a management information system is required to provide the necessary information for decision making. Types of decisions are actually divided into two parts:

-programmable decisions

-Non-programmable decisions (Ucakturk et al, 2013)

Repeated and habitual programmable decisions have provided easy rules in order to provide these types of decisions. The benefits of this type of decision making are being able to use the made decisions that are in the exploitation phase before a decision is taken.

There is not such circumstance for non-programmable decisions and complete data and analysis for decision making are required. The basic flow of information and transferring them to the organization have emerged through database creation, decision-making models, report tables, and specific information systems. Management information systems provide a part of the output data for the organization by establishing relations with databases outside the organization. Management information system helps managers to decide through the input and output data. For example, the planning process is a set of decisions so that the information management system is used efficiently and objectively in decision-making process (Anameric, 2005). Programmable management decisions are mainly used in the most common operations and routine control of the organization, including purchasing, storage, inventory and accounting. Non-programmable decisions are mainly about organizational status. Management information system is responsible for transferring the collected information to management levels. (Chen, 2012).

There are several reasons for achieving the importance of an information management system that helps the management:

-Management capabilities deal with issues such as personnel, machinery, equipment, raw materials, money and other problems due to lack of information.

-Pressure on managers to take decisions in complex situations for multiple reasons.

-Elevation change of pace from day to day

-Member of big organizations to maintain the economic, social conditions etc. and maintain a position in today's competitive market.

-Commitment to make a better relationship with other organizations (Ucakturk et al, 2013)

### **CONCLUSION**

Today's organizations are required to develop an information system consists of a combination of reducing costs and time to deliver high quality and various products. Enterprise resource planning systems identify the real potential of the company by merging and integrating the business and management. Enterprise resource planning systems help the managers in decision making with High and medium level of creative management for competitive advantage. These systems are programmable based on the company's type and its activities. The importance of management information system is due to the managers' guarantee at different levels of decision-making to access the reports and data stored in the system

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