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Role of Management Information System in Business: Opportunities and Challenges

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ABSTRACT

The role of Management Information System is described and analyzed in light of its capability for decision making. Decision making process and its impact on top level management in a business organization is explained with an emphasis on automated decision making. Management Information System (MIS) is basically concerned with processing data into information which is then communicated to the various departments in an organization for appropriate decision-making. MIS provides information which is needed to manage organizations efficiently and effectively. It involves three primary resources: people, technology and information. Management information systems are distinct from other information systems because they are used to analyze operational activities in the organization. Academically, the term is commonly referred to the group of information management methods tied to the automation or support of human decision making e.g., decision, expert systems, and executive information systems. Organizations still need different types of MIS serving various organizational levels, functions, and business processes. These needs create both opportunities and challenges. In this paper, an attempt has been made to study the role of MIS and opportunity and challenges in business.

Keywords: Information System, MIS, IT

INTRODUCTION

The concept of MIS is a systematic and scientific approach to compile internal and external information into integrated and effective business information. MIS is not new to large business organizations. Only its computerization is new. Before use of computers, MIS techniques were in existence to supply managers with the information that would permit them to plan and control their business operations. The computer has added more dimensions, such as speed accuracy and increased volumes of data that permit the consideration of more useful alternatives in decision making (Srivastava, 2004). It's a set of integrated technology that collects, processes, classifies, stores and distributes information to support decision making and control.

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This system contains information about crucial people, places and things within the organization and institution or the environment surrounding around it. MIS provides information about the real economic value to the business. Investment in information system will be better investment like other investments in building, machines, land and other assets. It is formally related with processing data into information. Management information system can be further defined as collection, analyses and processing of raw data into useful information and its allocation to the user in the required format. Data collection involves the use of Information Technology (IT) comprising: computers and telecommunications networks.

So, it is a system that provides information which is useful to manage organizations and institutions efficiently and effectively. Technology, information and public; these are the three primary resources which management information system occupied. It helps the management to solve the problems relating to the business decision making. Management information systems are regarded as a division of the overall internal control procedures in a business, which cover the value of people, documents, technologies, and procedures used by management accountants to solve business problems such as costing a product, service or a business-wide strategy.

It consists of information, which impacts managements to feel the beat of the organization and take decisions as a result. In reality, a full MIS consists of all the systems that the organization uses to produce the information that led management's decisions and actions. Management information systems are different from regular information systems which include other information systems applied in operational activities in the organization. Most recently, the value of the computer as a producer of management information has been recognized more. The term MIS was coined to describe this new era of computer applications. The term MIS was quickly adopted by the business world, although there has been considerable controversy about what it actually means. Originally, the term was restricted to systems producing information for business managers. Today, the term is generally used to describe the firm's overall computer system. It regards business organization as a system in which the flow of business information is scientifically designed.

Concepts of Management Information System

MIS has been understood and described in a number of ways. It is also popularly known as the Information System, the Information and Decision System, the Computer-based Information System (Tripathi, 2011). The MIS has more than one definition, some of which are given below:

- The MIS is defined as a system which provides information support for decision making in the organization.
- The MIS is defined as an integrated system of man and machine for providing the information to support the operations, the management and the decision making function in the organization.

- The MIS is defined as a system based on the database of the organization evolved for the purpose of providing information to the people in the organization.
- The MIS is defined as a Computer based Information System.

Information Requirements for modern business

Information system produces information to satisfy the needs of both the management and operations subsystems, as well as the need of parties external to the organization. This information reflects the internal activities of the organization, competitive actions, environmental and sociological interests and political and financial trends. It must represent what has happened, what is happening and perhaps most important of all, what will happen. This information requirement exists with equal importance in private industry, educational institutions, governmental organizations and other organizations.

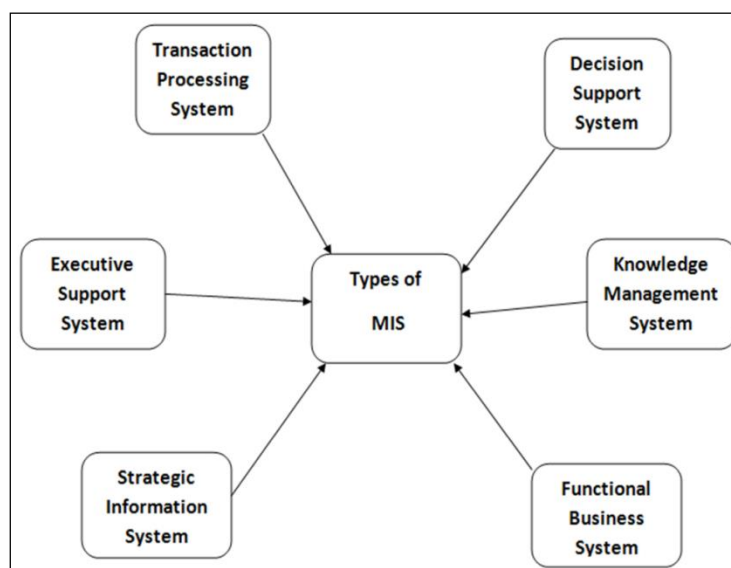
The growth of data and information processing is related directly to the growth of the organizations which comprise society in general. So, it became important for the organization to manage or process its information in better ways. MIS helps the organization to access its critical information (Wadhwa, 2006).

OBJECTIVES

1. To provide an overview of the information requirements of organizations.
2. To analyze the role of management and its dependency on information.
3. To discuss the role of information in the decision making process.

Types of Information Management Systems

There are many types of information management systems in the market that provide a wide range of benefits for companies.



- **Transaction processing systems (TPS)** collect and record the day to day dealings of an organization. This system is mostly used at lower level of

management. Management information systems (MIS) produce fixed, regularly scheduled reports based on data extracted and summarized from the firm's underlying transaction processing systems (TPS) helps to middle and operational level managers to provide answers to structured and semi-structured decision problems.

- **Decision-support systems (DSS)** are mainly computer program applications used by middle management to compile information from a wide range of sources to solve problems and make decisions. These decisions are taken by top level management executives.
- **Executive support systems (ESS)** is a reporting tool that provides quick access to summarized reports coming from all levels of organization and departments such as accounting, human resources and operations. This system provides critical information in a wide range of internal and external source in easiest way to use display to manager and executives.
- **Knowledge management system (KMS)** is a knowledge based information system to support creation, organization and disseminating business knowledge to employees and manager throughout the company.
- **Strategic information system (SIS)** applies Information Technology (IT) with firm's product, service and business process to help the organization to gain a strategic advantage over competition.
- **Functional business system (FBS)** focuses on operational and managerial application in support of business function like accounting and marketing.

Role of MIS in improving decision making

Decision making is an essential part of any business. This is because a majority of operations in an organization turn around decisions made by the management. In order to make decisions more effectively, it is very important to have a good management information system since decisions are based on information available. The effectiveness of every business information is dependent on the timing and content of the business information presented and management actions. The need for management information system is felt when the managers have to make proper business decisions, the manager will have to rely on his judgment but he must have information on the basis of which he arrives at business decisions. If an organization has a significant management information system, it is easy to take decision on the basis of available information. Good MIS ensures good decision making, just in the same way bad MIS drives the making of bad decisions. MIS plays a crucial role in decision making through its systematic tools, timely information and adequate managerial policies and regulations. The quality of managerial decision-making depends upon the qualitative information and the managers should therefore develop an environment that encourages the growth and quality information. Management information systems give managers fast access to information. It includes interaction

with other decision support systems, information examination, cross referencing of external information and possible data removal techniques. These systems provide information and strategic technique with practical decisions. Finally, Management Information systems play the crucial role of providing a wide range of alternatives from which decision makers are able to make their preferred decision. This is important for companies in the modern day generation where any minor fall in decision making can lead to very infinite losses.

Opportunities related to implementation of Management Information System

Modern businesses simply cannot compete without the power of management information systems. The dynamic nature of our current business environment dictates that all areas of business including accounting, finance, management and human resources force the power of information systems to perform effectively. Therefore, the ability to successfully design and implement management information systems has become a cornerstone in most of the organizations. So, MIS plays a highly strategic role in all businesses through the integration of people, process and information technology. This fact creates unique opportunities for management information systems. A business can attain following advantages with the implementation of MIS:

- **Economy of scale**

Generally, economy of scale refers to the facts that the collective costs of several combined operations may be less than the sum of the cost of the individual operations. With the help of MIS, all operations of the business can be combined and information can be supplied at the very fast rate from one department to another.

- **Getting more information from same amount of data**

The primary goal of MIS is to turn data into information, even though all the data that managers needed for decision making was in unstructured forms. MIS organized the data in such a manner that it becomes information for the managers and they can easily use this information for decision making in vital business projects.

- **Sharing of data**

With the use of MIS, data can be shared among authorized users, allowing users access to more of the data. Several users might have access to the same piece of data. Further, new data can easily be added to the old one and combined results can be found easily.

- **Balancing conflicting requirements**

In order to achieve the smooth functioning of management tasks, it is necessary to remove the personal conflicts with the help of MIS. A combined data is prepared and it is supplied to all the departments as per their requirement. So,

one department has not to depend upon other department for its vital and critical information. They can access the same information in their own department. It will remove interpersonal conflicts between different departments.

- **Enforcement of Standards**

MIS helps the organization to enforce standards for its data. It ensures that standard for such things as data names, usages and formats are followed uniformly throughout the organization.

- **Control Redundancy**

Since data was kept separately, the file oriented system is now integrated into a single database. There is no longer need of multiple copies of the same data. So repetition of the data and control redundancy is reduced, because there is no need to check data again and again.

- **Integrity**

One of the better opportunities for the organization for the implementation of the management information system is that it integrates the data of various places and department as a whole and also keeps separate records. It becomes easy for the managers to access the whole data of the organization.

- **Consistency**

MIS leads to the consistency and accuracy of the data. Data with the confusion and same alphabets can't be recorded wrongly because MIS detects these type of errors, while feeding the data into the system.

- **Security of information**

Security is the prevention of access to the data by unauthorized users with the use of MIS in the business. Since MIS has control over the operational data, it can define authorization procedures to ensure that only legitimate users access the data.

- **Flexibility and Responsiveness**

Since the data that was previously kept in several different files by several different user areas is now in the same database. It is possible to respond to request for data from multiple areas in much easier and more flexible way.

Challenges of using Management Information Systems

Organizations still need different types of information systems serving various organizational levels, functions, and business processes, and they increasingly need systems providing enterprise-wide combination. These needs create both opportunities and challenges. There are various types of problems faced by companies after applicable information system i.e.,

- Development of new computerized based information system is a problem for the organization due to the cost factor and it creates problems, because with the change of time there is need to update the information system. Employees should also be up- to- date about all changes on companies' websites.
- Employees should have the capacity of learning of the information system with the changing competitive and business environment; otherwise it will be difficult for the organization to stay in the market.
- Sometimes problem arises due to server crash and website crash. Sometime it leads to the loss of information and further Employee resistance to adopt the information system. When a new technology is introduced, employees resist it because they do not want to go with new system; they want to proceed in old pattern which they are using from many years and they have developed command on it.
- Cost of the implementation of the information system in the organization and its integrity with the various departments. Life of software system is also a challenge for the organization that which system would suit to the requirement of the organization because every system has limited scope and with the passage of time, new inventions in technology are occurring. They have to implement the new changed technology which would lead to increase in the cost of Information system.

CONCLUSION

It can be concluded that management information system is an important part of the business which provides timely and accurate information to the business managers and helps them in taking appropriate decisions. With the change of technology management, new softwares are now used in information systems which lead to the fast and timely supply of the information. But information systems have to face the challenges like implementation costs, employees' resistance to change, server crash problems and learning of new system problems and up-to-date information etc. For the success of information system, it is suggested that proper planning is very important in any information system because without planning nothing is possible. Project harmony is necessary and uniformity in the organization is also required.

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