



MANAGEMENT INFORMATION SYSTEM A COMPREHENSIVE ASSISTANCE FOR THE PROCESS OF DECISION MAKING.

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Abstract

Management Information System, shortly known as "MIS" aids the Managers in the process of decision making by providing them appropriate and reliable information with respect to Planning, Procurement, Execution, Control etc., As every system has its own values, problems, expectations, boundaries and limitations, the system MIS has got its own. Our purpose is to discuss about such parameters and to recommend the managers suitable remedies and techniques to improve their skills & efficiency in the process of decision making. More particularly provide them information at the right format in the right time. In this system, various data with respect to human resources, technologies, events etc are collected, processed and converted into information which in turn will be communicated to the Managers at various levels enabling them to make easy and efficient decisions.

Keywords: *Management Information Systems (MIS), Definition, Concept, Information Technology (IT), Decision-Making, System Concept and MIS In An Organization.*

INTRODUCTION

As we live in this 21st century, an information age, managers have to incorporate masses of data, convert that data into information, form conclusions about such information and make decisions leading to the achievement of business objectives. As information is very essential for the survival of any organization, information is an important resource like money, machinery and manpower. Effective and efficient coordination between various departments of an organization, rapid and trustworthy referencing, access to relevant data and documents, use of minimum labour resources, improvement in organizational structure of any department, management of day-to-day activities such as attendance, accounts, stock inventory, payroll, etc., monitoring the work culture between the employees, getting closer to the rest of the world, and day-to-day assistance for the needy employees are the major benefits of implementing MIS.

When an organization needs quick and easy access to the required information to enable its managers to take quick and accurate decisions about the development of its competitors & their probable future directions, the MIS provides such facilities so easily with the help of a computer program which contains a large database. As the employees need not collect any manual data for filing and analysis, MIS provides a considerable time-saving benefit to the employees. When the requirement of raw data is too large for employees to analyze, the computer programs may be written in such a way that it responds all sort of queries by the management and its employees.

MIS DEFINITION

The Management Information System (MIS) is a concept of the last decade or two. It has been understood and described in a number of ways. It is also known as the Information System, the Information and Decision System and the Computer- based information System.

The MIS has a lot of definitions, and the following are one among such definitions.

1. The MIS is defined as a system which provides information support for decision making in the organization.
2. 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.
3. 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.
4. The MIS is defined as a Computer based Information System.

With this number of definitions to define the MIS in which all of them meet at a single point that "It is a system to support the decision making process of an organization". The difference lies only in defining the basic elements of the MIS.

No matter whether it is big or small, data collection, processing and documentation consumes major time of the managers of an organization. Every manager of an organization is continuously searching for some information to perform his task. Since the information required varies with the nature of the people in an organization, a considerable portion of the overheads goes into this kind of unproductive work which may be avoided by using the system MIS.



The information is a processed product to execute various needs of the people. The reason behind the difficulty in handling these kinds of multiple requirements of the people are searching data consumes a lot of time and manpower and may require a difficult processing path. Since the time becomes precious and valued, all collected data must be processed and communicated in time; otherwise it will lose its value. The scope and the quantum of information required by an individual may be customized to meet out his needs; but it is very difficult to do the same for an organization. Since every business transaction is managed by human, a human error become more common in such transactions. Since human error becomes very difficult to control, it is seldom possible to ensure 100% quality assurance of information in terms of completeness, accuracy, validity, timeliness and meeting the decision making needs.

In order to get a better control over the activity of information processing, it is necessary to have a formal system which should take care of the following points:

- Handling of a voluminous data.
- Confirmation of the validity of data and transaction.
- Complex processing of data and multidimensional analysis.
- Quick search and retrieval.
- Mass storage.
- Communication of the information system to the user on time.
- Fulfilling the changing needs of the information.

MIS uses computer programs and communication technology to deal with these points of ultimate importance.

THE ROLE OF INFORMATION TECH IN MANAGEMENT SECTOR

System theory was first applied in the fields of Science and Engineering. “A system is essentially a set or assemblage of things interconnected or independent, so as to form a complex unity” Like what doctors do, an efficient manager should collect information about all parts of the organization, diagnose them and take necessary corrective action.

Since MIS is basically connected with processing data into information, the collection of data requires the use of Information Technology (IT) which comprises computers and telecommunication networks such as E. Mail, Voice Mail, Internet, telephone, etc. Computers are important instruments for more quantitative than qualitative data collection and storage & retrieval. With salient features like speed, accuracy and storage of large amount of data, telecommunications provide the means for both one-way and two-way communication for the transmission of messages. A combination of telephone, computer, processor, printer, etc. may be used in this purpose. A lot of time and money are saved and the security of data and messages is ensured. The system MIS enables an organization to provide answers to managers in search of knowledge. MIS does this by combining raw data about the organization’s operations with information obtained from employees through expert systems that reflect the organization’s procedures.

Before computers came into wide usage, the organizations found a lot of difficulties in gathering, storing, organizing and distributing large amounts of data and information. Developments in computer technology made it possible for managers to select the information they require, in the form in which they want. This information must be current & updated and in many cases is needed by many people at the same time. Nowadays though most of the firms depend on IT, personal computers (PCs) themselves cannot improve organizational productivity, but this only comes about if they are used efficiently and effectively. Putting the advanced technological systems to process data and employee information in place may be costly unless senior management, like the CFO, controls the purchasing of the basic systems needed by different functional areas from the outset.

The mechanism of MIS is made in such a way that information is available to the managers in the form they want it and when they need it. Computer programs can clearly support the organizations in the processing of data into accurate, well presented, up-to-date and cost effective information. The handling of information system will depend largely on the capabilities of the people involved in its processing and selection. The term management information system (MIS) made its first appearance in U.S. navy to construct a single integrated system to manage all navy resources.

The American Management Association encouraged the administrative systems community to make use of the MIS through a spate of subsequent reports and conferences sponsored by them. Though it does not contain full of information in technical sense, MIS is an information system because it provides valid information to the managers. Right from the inception of the system MIS in the year 1959, the various definitions of MIS spread widely across the world and got the endorsement of various industrial corporations, industrial consultants, research scholars, computer manufacturers and management writers.

Being widely utilized by the industrial community across the world, the system MIS satisfies all the information needs of managers. MIS is the study of providing information to people who make choices about the nature of valuable resources in a timely, accurate, and complete manner. Another definition highlights the use to which the information is put, rather than the way it is produced. It should provide a basis to analyze warning signals thoroughly which arises in an organization both externally and internally as this is the main function of data base.

- The routine operations should be carried out by means of automation thereby avoiding human work force in the processing tasks.
- It should assist management in making routine decisions.
- It should necessarily provide the information to make non-routine decisions.
- It should serve as a strategic weapon to gain competitive advantages.

THE ROLE OF MIS IN DECISION-MAKING

The decision making systems can be classified in a number of ways. Now it is classified into two types based on the manager's knowledge about the environment. If the manager operates in a known environment then it is a closed decision making system. The conditions of the closed decision making system are:

- The manager has a known set of decision alternatives and knows their outcomes fully in terms of value, if implemented.
- The manager has a model, a method or a rule whereby the decision alternatives can be generated, tested, and ranked.
- The manager can choose one of them, based on some goal or objective.

If the manager operates in an environment not known to him, then the decision making system is termed as an open decision making system. The conditions of this system are:

- The manager does not know all the decision alternatives.
- The outcome of the decision is also not known fully. The knowledge of the outcome may be a probabilistic one.
- No method, rule or model is available to study and finalize one decision among the set of decision alternatives.
- It is difficult to decide an objective or a goal and, therefore, the manager resorts to that decision, where his aspirations or desires are met best.

The MIS tries to convert every open system to a closed decision making system by providing information support for the best decision. The MIS gives the information support, whereby the manager knows more and more about the environment and the outcomes, he is able to generate the decision alternatives, test them and select one of them. A good MIS achieves this.

The basic concerns of the Management Information System (MIS) are the process of identifying, collecting, processing, storing and transmitting relevant information to support the management operations in an organization. Thus, the success of decision-making lies partly on available information and partly on the functions that are the components of the process. For example, if managerial objectives are absent or unclear, probably due to inadequate information, there is no basis for a search. When there is no information obtained through a search, there are no alternatives to compare; Without such comparison of alternatives, the desired results in a particular course of action is unlikely. According to Alabi the search could be through the following methods of viewing:

- Undirected viewing—this involves a general exposure to information where the search could be made for the viewer who has no specific purpose in mind.
- Conditioned viewing— this involves a good exposure to information where the search could be made for the viewer who has more or less clearly identified area or type of information in mind.
- Informal search—this is a relatively limited and unstructured effort to obtain specific information for a specific purpose. The information wanted is actively sought.
- Formal search—this is a deliberate effort, usually following a pre established plan, procedure or methodology to secure specific information relating to a specific issue.

Adebayo (2007) pleaded for the need of MIS in industrial atmosphere as it provides information needed for better decision making on the issues affecting the organization with regard to human and material resources. MIS may be viewed as a mean for transformation of data, which are used as information in decision-making processes. Figure 1 shows this understanding about information as data processed for a definite purpose.

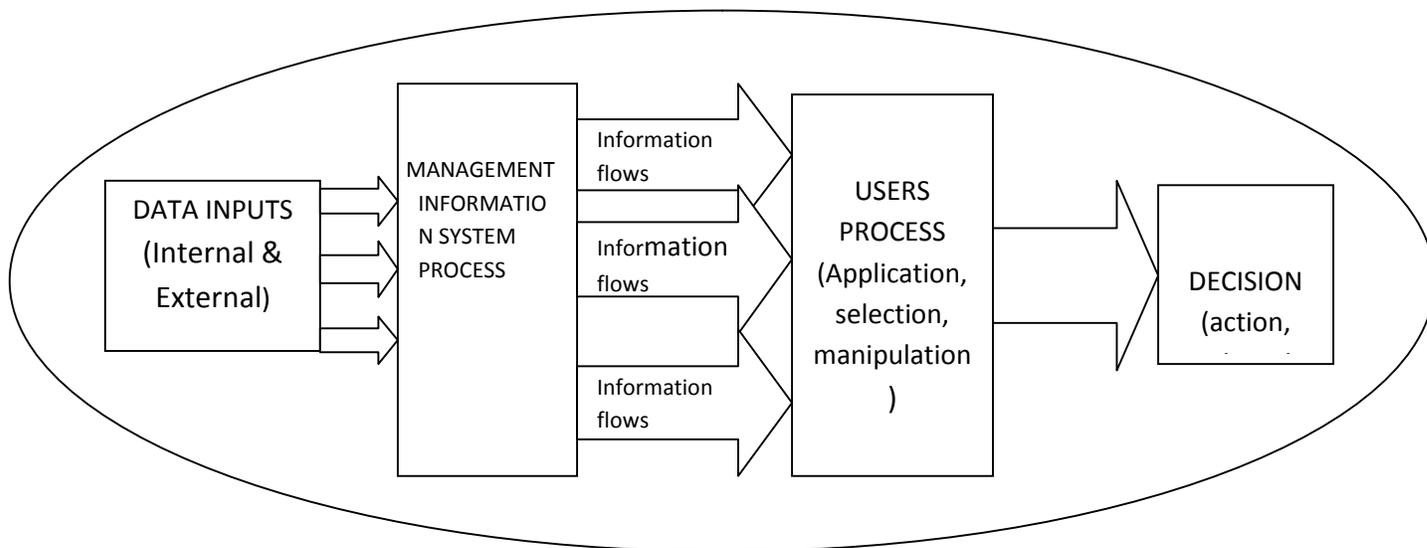


Figure 1. MIS and decision-making process

Since there are a lot of definitions of MIS, for the purpose of this research it can be defined as a system which provides accurate and timely information necessary to facilitate the decision-making process, enabling the organization's planning, control, and operational functions to be carried out effectively. By improving the processing speed and reducing the cost, MIS increases the competitiveness of the firm. Normally all organizations may have some kind of information system for their management. Accounting rules, stock inventory and market monitoring systems are the most traditional and common examples. The power of information technology has transformed the role of information in business firm. Now information has got recognized as the lifeblood of an organization (Figure 2). And without it, the modern company is said to be dead.

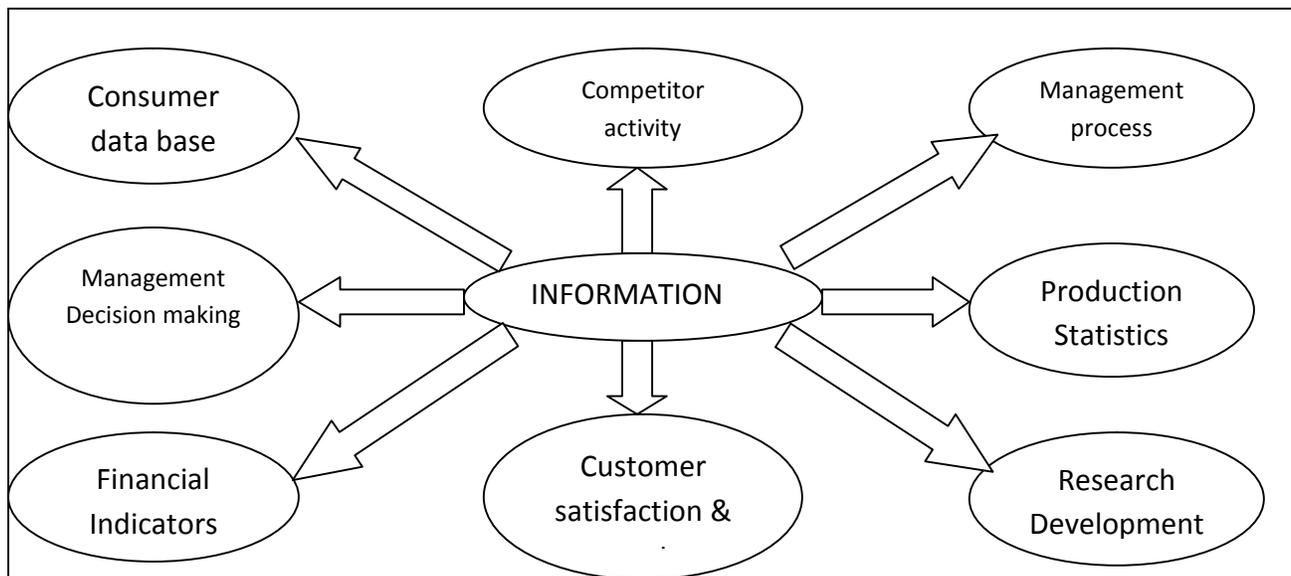


Figure 2. Information-the life-blood of the organization.

Following the huge investment made in the IT industry during recent years, demonstrating the effects of such investment on the performance of organizations has proven extremely difficult. MIS differ from regular information systems because the primary objectives of it are to analyze other systems dealing with the operational activities in the organization. Hence MIS is a subset of the overall planning and control activities covering the application of humans, technologies, and procedures of the organization. Within the field of scientific management, MIS is most often tailored to suit the computer automation in view

of supporting of human decision making. Figure 3 shows the conceptually decomposing of the different management systems and key in an organization Reducing the operative expenses and increasing the profit can be obtained with the help of Well-constructed and well-organized MIS.MIS can help management to increase its efficiency by providing critical information about procedures and operations rapidly and accurately.

VERY KEY CONCEPTS

Sub system: While an organization as a whole is a system, the various components or parts within it are called the subsystem. Thus a department is a subsystem of the organization.

Closed system: A system that does not interact with its environment. A closed system has fixed boundaries; its operation is relatively independent of the environment outside the system.

Open system: A system that interacts with its environment. Thus an open system is one which constantly comes into contact with the environment.

These resources are called as inputs which are converted into products by using technology, technology systems and methods.

System approach is more useful in managerial decision making process. It provides a frame work through which organization, environment interaction can be analyzed and contributes for effective decision -making.

CONCLUSION

MIS brings together the raw collected data by the various departments or business areas of the organization which may be useful for specific functions such as accounting, stock inventory etc. MIS differ from regular information systems because the primary objectives of these systems are to analyze other systems dealing with the operational activities in the organization. In this way, MIS is a division of the overall planning and control activities covering the application of humans, technologies, and procedures of the organization. Within the field of scientific management, MIS is most often tailored to the automation or support of human decision making. Management information systems (MIS) make it possible for organizations to get the right information to the right people at the right time by enhancing the interaction between the organization's people, the data collected in its various IT systems, and the procedures it uses. As organizations grow, MIS allows information to move between functional areas and departments instantly, reducing the need for face-to-face communications among employees, thus increasing the responsiveness of the organization.

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