



ROLE OF MANAGEMENT INFORMATION SYSTEM FOR DECISION MAKING IN THE ORGANIZATION

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ABSTRACT

Management Information System (MIS) is a professional and academic discipline concerned with the strategic, managerial and operational activities involved in the gathering, processing, storing, distributing and use of information and its associated technologies in society and organizations. MIS is a computer system that provides management and other personnel within an organization with up-to-date information regarding the organization's performance. The purpose of MIS is to meet the general information need of all the managers in the organization with the help of three resources like people, technology and information. MIS provides accurate and timely information necessary to facilitate the decision-making process and enable the organizations planning, control and operational functions to be carried out effectively. MIS is a rapidly evolving IT based system that continuously create information from raw data collected from various sources and compiles individualized reports of various kinds which helps different levels of management in informed strategic decision making. MIS is oriented with rapidly evolving technology along with Information and Communication Technology (ICT). ICT plays an important role for storage, retrieval and transmission of message and become an essential component in the process of decision making in the organization to assist managers at all levels. MIS ensures that an appropriate data is collected from the various sources, processed and send further to all the needy destinations. MIS provides information which is useful to manage organizations and institutions efficiently and effectively. In this paper the role Management Information system in business organizations for decision making is discussed.

.Keywords: Information system, MIS, ICT, Decision Making.

1. INTRODUCTION: During the growth of a competitive global environment, there is considerable pressure on most organizations to make their operational, tactical, and strategic processes more efficient and effective. An information system (IS) is a group of components which can increase competitiveness and gain better information for decision making. Today due to globalization, increase in demand, competitive influence and overall environmental vagaries, information needs of modern organizations have become quite enormous and challenging. Due



to large amount of information, it requires to pay attention about how information is gathered, stored, disseminated and utilized. **Information system** is organized combination of people, hardware, software, communication networks, data resources, policies and procedures that stores, retrieves, transforms and disseminates information in an organization. MIS is such an integrated information system and is defined as a systematic and scientific approach to compile internal and external information into integrated and effective business information. MIS can also be stated as an integrated technology to collect, process, classify, store and distribute information. MIS contains information about crucial people, systems and environment within and around the organization. MIS is generally regarded as the division of overall internal control procedures in a business which covers the value of people, the value of information, the value of documentation and the value of technology. MIS is a type of information system which combine hardware, software and network products in an integrated solution and provides data to the managers in a format suitable for analysis, monitoring, decision-making and reporting (Asefeh Asemi,2011). Managers have to assimilate large amount of data, into information, and then arrive to a conclusion to the achievement of business objectives. MIS supports planning, control and operation functions of an organization in the proper time frame to assist the decision makers. MIS contains information about crucial people, systems and environment within and around the organization. MIS is best suited to identify problems and help management to understand them to make suitable decisions. The paper consist of literature reflections, objectives of MIS, role of MIS, role of Information and Communication Technology in MIS , MIS and decision making process followed with conclusion.

2.LITERARY REFLECTIONS :

MIS is a rapidly evolving concept which needs to be reviewed and modified according to the changes in its environment. The concept of MIS is not new for an organization. Its computerization is the only new factor. Computerization of MIS increased the speed, accuracy and the ability to deal with multiplied volume of data. MIS analyze data based on principles, theories and concepts of different subjects like Management Science, Managerial Accounting, Information Technology, Networking, System's Theory etc. MIS gives high regard to individual and his ability to use information. MIS can be evolved for any objective, if it is evolved after systematic planning and design. –Techopedia

MIS consist of Management, Information and Systems respectively. Management as the process through which planning, organizing, initiating and controlling of operations within business is carried out (Kumar, 2006) . Information as a stream of data that have been processed to the form that it makes sense to its users. Information is organized data that has meaning. On the



other hand, System is an assemblage of different but interrelated and interdependent parts that functions as a whole to achieve common interest (Gabriel, 2013); a set of elements joined together for a common objective (Kumar, 2006). Judging from these views, it is arguable that every system comprises parts, are interrelated and interconnected; becomes one entity and consequently pursues common goal. Jahangir (2005) states that based on the significant role that information plays in choice of decision to be made, organizations must ensure that they have a good management information system. The subject has attracted the following definitions: an integrated system of providing information to support operations management and decision making functions in an organization (Ajayi & Omirin, 2007). Laudon & Laudon, 2007 opines that MIS is basically concerned with the process of collecting, processing, storing and transmitting relevant information to support decision making in any organizations . In addition to that, it is noteworthy for the MIS strategy or tool used to be in line with the decisions that are to be made. (Jarboe, 2005).

2. Objectives of MIS :

The followings are the objectives of the MIS : (Gerbi dawit yadeta , 2016).

- To analyze the role of management and its dependency on information.
- To discuss the role of information in the decision making process.
- To identify the need for information in the day-to-day operations of the organization.
- To study the major components of MIS in modern era.
- To analyze application of MIS in existing organizations and its significance.

3..Role of MIS in an Organization

The huge role MIS have on the survival and growth of a business organization are summarized below:

- MIS gives managers feedback about the performance of the organization.
- MIS provided need based, personal oriented managerial information are communicated in the form of time- based or on- demand reports.
- MIS provides the information primarily geared to achieve strategic and efficient managerial decision making.; This helps to take fact based decisions.
- MIS provides timely, accurate information which helps in informed decision making.

4. Role of Information and Communication Technology in MIS:

In today's digitalization age, information networks play a major role in controlling and directing the flow of huge amount of information among organizations. The power of technology has transformed the role of information in a business organization. MIS is basically concerned with



processing data into information. Data collection involves the use of Information Technology (IT) comprising computers and telecommunications networks (Email, Voice Mail, Internet, telephone, etc.). ICT plays an important role for storage, retrieval and transmission of message and become an essential component in the process of decision making in the organization to assist managers at all levels. Developments in computer technology made possible for managers to select the information they require, in the form best suited for their needs and in time they want. MIS with ICT aimed at assisting managers and operating personnel, to produce timely, accurate information, well presented and up-to-date information required for efficient and effective process. Different systems are designed with the support of ICT like expert system, decision support system, executive decision support, information systems, enterprise resource planning etc. ICT is included in different types of information management systems like transaction processing system, decision support systems, executive support systems, knowledge management systems and strategic information systems. Current era of the evolution of MIS is based on Cloud Computing Technology which enabled networks to provide data storage, software applications and huge information base independent of the constraints of configuration, location & nature of hardware. The development of High speed mobile data collections (4g in India) and Wi-Fi networks provided new levels of mobility which enabled the remote access of MIS even through smartphones. Alonso et al (2010) have presented an implemented web based consensus support system that is able to help, or even replace, the moderator in a consensus process where experts are allowed to provide their preferences using one of many types (fuzzy, linguistic and multi-granular linguistic) of incomplete preference relations. Nokhbatol foghahaayee et al (2010) have introduced a fuzzy decision support system (FDSS) with a new decision making structure, which can be applied to manage the crisis conditions in any large scale systems with many parameters. These decisions are expressed in the form of some scenarios with different desirability degrees, which are determined by some properly developed fuzzy multi-criteria decision making methods, helping the manager to choose the best one according to his discretion.

5.MIS AND DECISION MAKING PROCESS : In today's competitive world, managers have to assimilate masses of data, convert that data into information, form conclusions about that information and make decisions leading to the achievement of business objectives. MIS provide accurate and timely information necessary to facilitate the decision-making process and enable the organizations planning, control and operational functions to be carried out effectively. MIS improves effectiveness of decision-making of a range of different tasks. Development of information and communication technologies (ICTs) as change structures of societies, also affected task of manager's making decision. The ICT has become an essential component in the process of decision making in organization and managers at all levels . (Feizi&Moghadassi,



2012). ICT enables to collect, analyse and evaluate data and transferring them from one point to another and cause instant access to information, The information is made available in the form of periodic reports, special reports and output of mathematical simulations. Thus, the success of decision-making is highly dependent on available information and partly on the functions that are the components of the process.

Simon (1984), a leading authority in management decision- making considers that decision making comprises four principal phases:

- Intelligence- Search the environment for conditions calling for decision making.
- Design- Inventing, developing and analyzing possible courses of actions. This involves processes to understand the problem, to generate solutions and testing of solutions for feasibility.
- Choice- Selecting an alternative or course of action from those variables.
- Review- Assessing past choices. This model was later incorporated by George Huber into an expanded model of the entire problem-solving process (see Fig.,1).

Simon divided kinds of decisions into two basic types:

- i) Programmed decisions:** These **are** routine and repetitive decisions, and the organization typically develops specific ways to handle them. For this kind of routine repetitive decisions, standard arrangement decisions are typically made according to established management guidelines.
- ii) Non-programmed decisions:** These are in contrast, are typically one-shot decisions that are usually less structured than programmed decisions (Certo, 1997). Simon's model of decision-making has three steps (Figure 1)

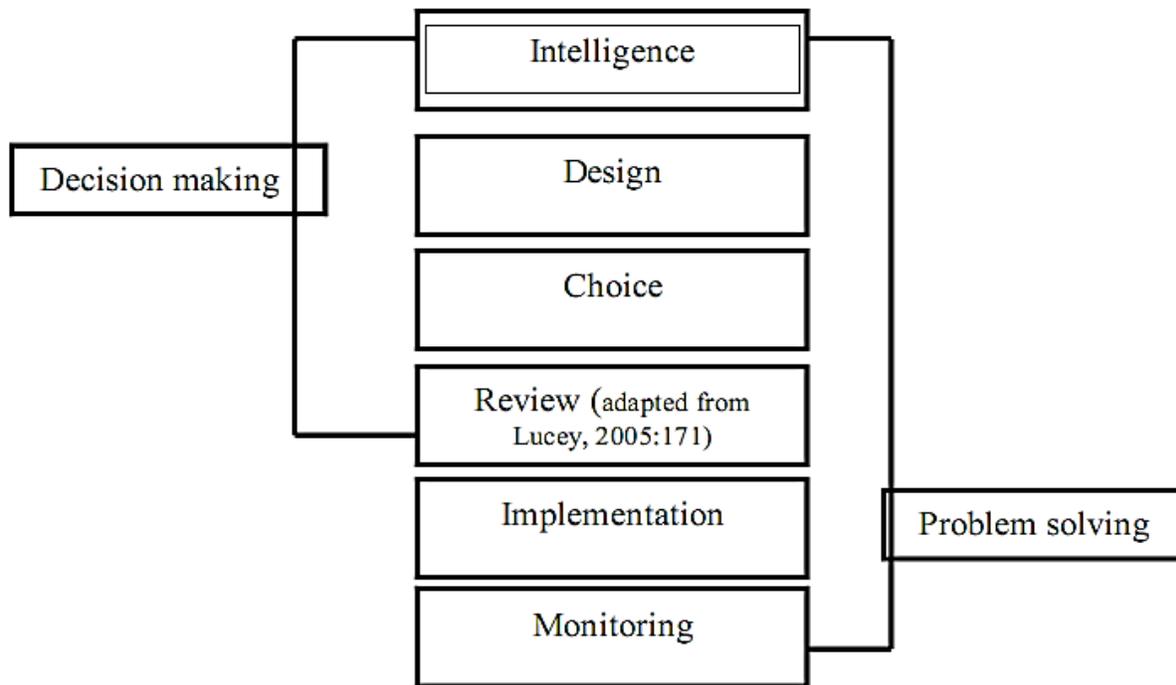


Fig. 1: Process of Decision Making –

[Source - Adapted From Ralph M. Stair And George W. Renolds (2003) Principles of Information Systems, Six Editions]

6. CONCLUSION: In today's world of ever increasing complexities of carrying out business, in order to survive and grow every organization must have a properly planned, analyzed, designed and maintained MIS. MIS provides accurate and timely information necessary to facilitate the decision-making process and enable the organizations planning, control, and operational functions to be carried out effectively. It plays specific, diverse and vital roles to different levels of management in an organization . MIS is an important part of the business organizations which provides timely and accurate information to the business managers and helps them in taking appropriate decisions. Well-constructed and well-organized MIS can provide management with the knowledge it needs to reduce operating costs and increase profits. 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, process and technology. MIS should be used to recognize , monitor, measure , limit and manage risks. Developing an effective MIS involves the efforts of managers as well as those of specialists and helps for effective decision-making. While implementing MIS in the organization, it requires to consider 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. For the success of MIS it is suggested that proper planning and training is very important .

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