



## Management Information Systems and Decision Making Process: (Roles, Review, and Recommendations)

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### Abstract

Management Information Systems is described and analysed 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. Limitations and challenges of MIS are discussed and a set of six recommendations proposed for increasing the effectiveness of MIS in the decision making process.

**Keywords:** Information Systems; Transactional Processing Systems; TP; Management Information Systems; MIS; Expert Systems.

### Introduction

Management information systems (MIS) is the study of people, technology, organizations and the relationships among them. MIS professionals help firms realize maximum benefit from investment in personnel, equipment, and business processes. MIS is a people-oriented field with an emphasis on service through technology. Management information systems are typically computer systems used for data managing to make searching, analyzing data and spring information easier.

Management information systems are distinct from other information systems in that they are used to analyse and facilitate strategic and operational activities.

Academically, the term is commonly used to refer to the study of how individuals, groups, and organizations evaluate, design, implement, manage, and utilize systems to generate information to improve efficiency and effectiveness of decision making, including systems termed decision support systems, expert systems, and executive information systems. Many business schools (or colleges of business administration within universities) have an MIS department, alongside departments of accounting, finance, management, marketing, and may award degrees (at undergrad, masters, and PhD levels) in MIS.

### 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, the Computer-based information System. The MIS has more than one definition, some of which are given below.

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

### **Role of MIS in Improving Decision Making**

Preliminarily, it is inherent to state that decision making is an integral part of any Business. This is because a majority of operations in an organization revolve around decisions made by the management and other key stakeholders in the organization. And in order for decision to be made adequately, it is vital for there to be a good information system since decisions are based on information available. As a notable general observation, a good MIS ensures good decision making just in the same way bad MIS propel the making of bad decisions. UStudy.in (2010) supports the above observation by saying that "The quality of managerial decision-making depends directly on the quality of available information" and the managers should therefore cultivate an environment that encourages the growth and viable sprouting of quality information. Essentially, before deciding on which MIS strategy to use, it is vital to ensure that the choice made is fully compatible with your current system. As a key consideration, Management Information Systems is a highly complex and delicate arena that calls for a lot of caution to be taken by its managers. It is for this reason that it is recommendable for organizations to ensure that they carefully select the individuals who are placed to control the systems. The more cautious and professional a person is, the better the person gets an assurance of positive prospects of in MIS with regards to decision making and other related areas of business . As a fundamental point, a good number of MIS used today can perform multiple tasks all at the same time. This potential to multitask increases efficiency in a company since several business operations can be conducted simultaneously. With special regards to decision making, the capacity to multitask ensures that decisions are made speedily when compared to those systems which can only handle one task at a time. On another level, a good number of MIS play the role of record keeping or institutionalization of data bases that can easily keep confidential or invaluable information in Management information systems and business decision making.

### **Review of Management Information System**

Remember to consider all of the ways the organization regularly collects information or data. One improvement team developed a bereavement questionnaire, only to have the first respondent point out that she had answered similar questions from the hospital chaplain's office just a few days earlier! In nursing homes required to use the extensive Minimum Data Set (MDS) tool, a great deal of information will already have been gathered. Sometimes marketing, nursing, or billing departments have data that would be useful - and that would not require additional patient surveys. A quick review enables an improvement team to find what its members know - or don't know - about the organization's record-keeping and information management processes. What can the MIS do? Can it track the outcomes relevant to the team's improvement projects? What kinds of information can be used to enrich quality improvement efforts? Are there ways to use information from the financial system - for example, tallying diagnostic tests or procedures used on patients with certain diagnoses - to track quality improvement measures? The process itself can generate quality improvement endeavours.

### **Impact of the Management Information System**

Since the MIS plays a very important role in the organization, it creates an impact on the organization's functions, performance and productivity. The impact of MIS on the functions is in its management. With a good support, the management of marketing, finance, production and personnel become more efficient. The tracking and monitoring of the functional targets becomes easy. The functional, managers are informed about the progress, achievements and shortfalls in the probable trends in the various aspects of business. This helps in forecasting and long term perspective planning. The manager's attention is brought to a situation which is exceptional in nature, inducing him to take an action or a decision in the matter. A disciplined information reporting system creates a structured data and a knowledge base for all the people in the organization. The information is available in such a form that it can be used straight away or by blending analysis, saving the manager's valuable time. The MIS creates another impact in the organization which relates to the understanding of the business itself. The MIS begins with the definition of a data entity and its attributes. It uses a dictionary of data, entity and attributes, respectively, designed for information generation in the organization. Since all the information system use the dictionary, there is common understanding of terms and terminology in the organization bringing clarity in the communication and a similar understanding an even of the organization. The MIS calls for a systemization of the business operation for an affective system design. A well designed system with a focus on the manger makes an impact on the managerial efficiency. The fund of information motivates an enlightened manger to use a variety of tools of the management. It helps him to resort to such exercises as experimentation and modelling. The use of computers enables him to use the

tools techniques which are impossible to use manually. The ready-made packages make this task simpler. The impact is on the managerial ability to perform. It improves the decision making ability considerably. Since the MIS works on the basic systems such as transaction processing and databases, the drudgery of the clerical work is transferred to the computerized system, relieving the human mind for better work. It will be observed that a lot of manpower is engaged in this activity in the organization. If you study the individual's time utilization and its application; you will find that 70% of the time is spent in recording, searching, processing and communication. This is a large overhead in the organization. The MIS has a direct impact on this overhead. It creates an information- based work culture in the organization.

## Recommendations

Despite the positives associated with the role of MIS in decision making process, there are a few challenges that are believed to limit the efficacy of MIS. These include:

- [1] The dynamic nature of MIS makes it difficult for some organizations to keep up with the principles, strategies, propositions or even ideas.
- [2] Different situations call for different decisions to be made. This poses challenges to MIS theorists since some MIS tend to not be adaptable
- [3] The institutionalization, programming, monitoring and evaluating MIS requires a lot of expertise—something which numerous organizations lack.
- [4] The running of MIS programs tends to be relatively costly for some organization— especially small ones who are not well-endowed financially.
- [5] MIS is more of a science-oriented field while business is art-oriented. Consequently, finding a middle ground where the two can be linked is quite challenging to some people.
- [6] Most organizations do not a well-defined decision making system. So even with the right MIS tools, very little can be achieved in terms of improving decision-making.
- [7] Based on these limitations—plus other underlying issues that arise from the main discussion, the following recommendations are suggested:
- [8] There should be an increased monitoring of MIS so as to avoid falling victims of unobserved MIS which has dire ramification
- [9] Managers and business owners should find a way of tailoring information in a way That it fits various decision making processes in variant businesses.
- [10] The management should encourage the effectuation of a mutually interdependent and balanced MIS where workers and automated systems are handled with due respect.
- [11] Business entities should find a way inculcating teachings about new MIS in order to reduce the trend of businesses being left behind on new inceptions.

Principally, it is inherent to note that in spite of the fact that this paper is expressively analytical, more research needs to be done in order to bring more information into public knowhow. Moreover, business owners must learn to cope up with the ever changing trends in MIS and decision making, without which it will be very challenging to make positive progress in decision making. Finally, it is vital to remember that improvement in decision making is fundamentally Meant to ensure customer satisfaction while businesses continue to flourish in success. All MIS Strategies should therefore be tailored in a way that the above business goals are achieved.

## Conclusion

The MIS is a product of a multidisciplinary approach to the business management. It is a product which needs to be kept under a constant review and modification to meet the corporate needs of the information. It is prescribed product design for the organization. MIS is also helpful in its management, with a good support, the management of marketing, finance, production and personnel become more efficient. The tracking and monitoring of the functional targets becomes easy. The functional, managers are informed about the progress, achievements and shortfalls in the probable trends in the various aspects of business. This helps in forecasting and long- term perspective planning.

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