

Systems for Managing Information & Making Business Decisions

Dr. Mahesh Sharma¹, Prof. (Dr.) Anil Parkash Sharma²

¹*Vice Principal, Ideal Institute of Management and Technology (GGSIPU), Karkardooma, Delhi - 110092*

²*Director, Ideal Institute of Management and Technology (GGSIPU), Karkardooma, Delhi - 110092*

Abstract: In light of its capacity for decision-making, the function of management information systems is described and examined. With an emphasis on automated decision making, the decision-making process and its effect on top-level management in a business organization are explained. Six recommendations are made to improve the effectiveness of MIS in the decision-making process after discussing its shortcomings and difficulties.

Keywords: Information Systems, Transactional Processing Systems, TPS, Management Information Systems, MIS, Expert Systems.

INTRODUCTION

Expert Systems, Management Information Systems, and Transactional Processing Systems are the three types of systems that can be used to conceptualize information systems. Executive Information Systems and Decision Support Systems are two examples of the many subsets of MIS. It is best to consider the function of MIS in decision support within the framework of the subset known as Decision Support System (DSS). A DSS is a computer-based system (an application programme) that can analyze organizational (or business) data and deliver it to the user in a way that makes business decisions easier and more successful. It functions primarily as an informational application that relies on data entered before when responding to a query. As an illustration, a decision support system could offer:

- Projected revenue statistics based on new product sales assumptions
- Comparable sales data for the previous week/month
- The effects of various decision-making options in light of prior knowledge.

The broad areas of IS and DSS might occasionally overlap, and a DSS may be able to visualize

information using an expert system or artificial intelligence (AI). The DSS is typically utilized by individuals at various levels within a company organization. Front line supervisors utilize DSS for daily operational decisions, middle management deploys it for tactical decisions, and top level management uses it for strategic decisions.

As a result, the decision-making process in any business is a crucial component for both organizations and individuals because both depend heavily on these decisions to survive in the fiercely competitive world of entrepreneurship. More significantly, the Management Information System, or MIS, has become a more prevalent tool for decision-making and institutionalization. DSS, which support informed decision-making, are a part of MIS. Notwithstanding the significant advantages of utilizing MIS in decision-making, some detractors have apparently been stating slowly but steadily that MIS has unavoidable negative impacts on businesses and should be utilized with caution or avoided altogether.

To describe MIS, it must first be broken down into the three components that make it up: management, information, and systems. Management is the process by which managers plan, organize, start, and control operations within their enterprises, according to this line of thinking. Basically, there must be subjects or workers to manage for a management to exist. It is further mentioned that information typically refers to data that has been evaluated. In other words, data that is analyzed utilizing business laws, principles, and theories put forward by various macroeconomists resulted in information (with regard to business).

A system is defined as "A collection of components working towards a single goal." Business systems typically comprise of smaller systems, or "subsystems," that all work together to ensure the

effectiveness of the larger systems. In actuality, systems differ from one organization to another based on a variety of important aspects, including the size of the enterprises, organizational priorities, and the type of organizational operations.

The term "management information systems" refers to a system that makes use of information to enable effective management of enterprises, according to the aforementioned definitions. Essentially, the entire MIS system functions simultaneously in order to guarantee system wide effectiveness.

Since each component is intended to work in concert with the others, failure in one component results in overall component failure.

Hence, just as poor management results in poor decision-making, so does strong management of information systems contribute to successful decision-making in business. It is based on this foundational concept that this paper is going to vigilantly analyze the roles of management systems in decision making. Significantly, the structure of this study will be as follows. The study will start by providing a brief outline of the business decision-making process and establishing how it relates to MIS. From this point on, a thorough examination and review of the functions of MIS in enhancing decision making will be conducted. This will be followed by a discussion of the dubious aspects of MIS and decision-making. After then, solutions to the underlying problems raised by the study will be suggested. The paper will be concluded with a summary of its main points.

Role of MIS in improving decision making

It goes without saying that decision-making is a crucial component of every business. This is due to the fact that most business decisions are made by management and other important stakeholders inside an organization. Furthermore, as decisions are dependent on the information at hand, a strong information system is essential for decisions to be made effectively.

Jahangir (2021) makes the following statement in relation to this: "Organizations must guarantee that they have a good management information system based on the significant role that information plays in choosing of decision to be made."

A noteworthy general remark is that good MIS guarantees good decision-making, just as bad MIS encourages the taking of wrong decisions.

The managers should therefore foster an environment that encourages the growth and viable sprouting of quality information, according to UStudy.in (2022), which supports the aforementioned observation by stating that "The quality of managerial decision-making depends directly on the quality of available information."

In essence, it is crucial to make sure that your chosen MIS approach is completely compatible with your existing system before choosing it. This will not only assist in preventing irrational decisions, but it will also spare you the time and money that individual would have otherwise squandered. Furthermore, it is important that the MIS approach or tool employed be in harmony with the decisions that need to be taken. In other words, there should be a link between the decision to be taken and the MIS that will be used by small-business owners as well as larger corporations.

One important factor to keep in mind is that Management Information Systems are a very delicate and intricate field that requires managers to exercise great prudence. For this reason, it is advised that businesses make sure they carefully choose the people who will be in charge of managing their systems. A person's chances of success in MIS with regard to decision-making and other associated business sectors are better guaranteed the more careful and professional they are. What are some of the academic arguments, facts, opinions, and observations made by various macroeconomists regarding the roles of management information systems in enhancing decision making now that that has been properly defined?

First of all, MIS offers a suitable framework for wise decision-making. In essence, it would be very challenging for enterprises to make decisions without the established mechanisms of acquiring information in MIS. This is because, in the absence of verified knowledge, they would be obliged to create unfounded information. Via its methodical tools, timely information, and suitable managerial policies and regulations, MIS often lays a solid foundation for the development of tangible judgments.

The laws pertaining to management information systems in enterprises can serve as a guide for business owners when they are making important choices for their companies. As a result, managers and other important decision-makers are restrained from going beyond their authority or their mandate. This is highly important since it keeps firms in check and balanced,

ensuring that only tried-and-true judgments are taken into account and untested ones are rejected. Most crucially, the ability to direct decision-making promotes development and enhancement of business operations.

Also, the majority of MIS solutions have the ability to provide real-time updates on system or corporate events. Real-time, as used by academics, merely refers to current updates of events in a system. These quick updates assist managers in taking the essential steps as soon as it is deemed necessary, particularly when identifying and managing crises. Due to the promptness of the decisions made, this promotes advancement and improvement in business operations. This is crucial for businesses in the present day, because even the smallest error in judgment can result in enormous losses.

Yet, management information systems are crucial for enhancing corporate securities. For instance, the owner may frequently easily programme the majority of management information systems to carry out specific tasks at specific times. In practice, managers can set up the system to do specific routine checks that can enhance business efficiency by making it simple to find bugs or other issues. Also, most MIS may be programmed, saving owners a great deal of important time and money. In other words, because the systems are programmable, corporate managers can set them up to automatically identify and even fix certain flaws. So, the manager or system operator can allocate the time and resources that would have been spent on monitoring or resolving issues to other crucial tasks. The business will undoubtedly advance by regularly programming a management information system because time and resources can be conveniently directed along the proper business channels.

Fundamentally speaking, a majority of MIS in use today are capable of carrying out several activities concurrently. The ability to multitask makes a firm more efficient because it allows for the simultaneous performance of numerous tasks. The ability to multitask guarantees that decisions are made quickly in comparison to those systems which can only handle one task at a time. This is especially true in relation to decision-making.

Certain MIS provide simultaneous access by several people to the same content without any errors. This possibility increases business owners' accountability because it allows for multiple users to view the same

content and check to see if it is consistent or not. In reality, the lack of accountability from individuals tasked with managing specific details tends to hurt most firms. Macroeconomists refer to this safeguarding activity of some MIS as the "gate-keeping" role of MIS in decision making and the general health of the business. On a different level, many MIS serve as record keepers or institutionalize data bases that can readily preserve sensitive or priceless information.

In essence, making decisions frequently necessitates reading specific prior work. This is when keeping records is useful. On the other hand, databases typically work to offer potential locations for information retrieval. MIS's primary record-keeping and data-basing tool guarantees that decisions are made successfully and that organizations run efficiently.

Adding to the arguments for how MIS can help with decision-making is the fact that:

Managers get quick access to information thanks to management information systems. Interaction with other decision support systems, information requests, cross-referencing of outside data, and future data mining techniques can all be examples of this. In order to help managers understand how their choices fit into the overall company plan, these tools can also compare strategic objectives with pragmatic choices.

In conclusion, Rhodes merely argues that management information systems play a significant role in obtaining useful information from businesses. However, only a small number of organizations have successfully taken on this role and even inspired other groups to follow suit. Because of this, decision-making based on the customization of useful information has only slightly improved. Later in this paper, under the heading suggestions, is a straightforward approach to resolving this problem.

The use of automated management information systems has increased over the last several years as well. These automated methods have significantly improved decision-making and altered it to a big extent. For instance, businesses can use automated MIS to eliminate the need for workers to provide services around-the-clock. Alternatively, it is possible to train machines to perform tasks for us. Naturally, this has a significant positive impact on decision-making since managers are freed from having to make certain choices; particularly those that are technical

and best understood and resolved by an automated system.

Organizations should exercise caution when relying solely on automated systems, especially when those decisions could be detrimental to the firm. This is allegedly based on the notion that auto systems occasionally may be flawed and thus requires routine periodic inspection. Managers and business owners must therefore strike a balance between using the human aspect of operation and delegating some tasks to automated systems in order to avoid falling victim to over-reliance on automated technologies. Jahangir claims that by combining the responsibilities of these two extremes, it will be possible to maximize the capacity of each side while ensuring that both ends of the organization continue to function together.

Once more, MIS is recognized for basing its operations on organized ways. Importantly, this guarantees that judgments made in a firm are well-planned and structured, which in turn promotes objectivity when making decisions. As a result, thanks to its methodical and organised operating formula, enterprises and the decision-making process are better. Macroeconomists can use the ideas, methods, and modes of operation in MIS to mentally choose between wise and foolish choices. Once the decisions have been sieved, the excellent ones are rewarded and the bad ones are severely discouraged. Effectively, this guarantees the success of organizational decisions, which directly ties to enhancing the decision-making process.

Several academics agree that MIS tends to be a more practical business tool with testable operational procedures. Therefore, it offers concrete knowledge that may be used to support judgments through its arguments and propositions. This stands in stark contrast to the majority of business tools now in use, which are essentially fictitious. In practice, MIS-based decisions are more accurate and practical than their alternatives, which promote the improvement of business decisions.

Finally, a fundamental function of management information systems is to offer a wide range of streamlined possibilities from which decision-makers can select their preferred options. This is crucial because it guarantees that, regardless of the decisions taken by decision-makers, the results will almost always be favourable. In actuality, it is for this reason

that many decision-makers favour the use of MIS tools when making difficult business decisions.

CONCLUSION & RECOMMENDATIONS

There are some issues that are thought to hinder the effectiveness of MIS notwithstanding the benefits connected with its position in the decision-making process. They include:

- Various scenarios require different judgments to be taken;
- The dynamic nature of MIS makes it challenging for certain businesses to keep up with the concepts, tactics, propositions, or even ideas. This presents difficulties for MIS theorists because some MIS tend to be immobile.

- Many organizations lack the knowledge needed for institutionalizing, developing, monitoring, and assessing MIS.

- Running MIS programmes can be expensive for some businesses, especially smaller ones with limited financial resources.

- MIS is more of a scientific field, whereas business is more of an artistic one. It can be difficult for some people to identify a middle ground where the two can be connected. The majority of organizations lack a clearly defined decision-making process. Thus, very little can be done to improve decision-making even with the proper MIS tools.

The following advice is offered based on these restrictions and additional underlying problems that emerge from the primary discussion:

- More MIS should be monitored in order to protect people against unnoticed MIS, which can have serious consequences.

- Managers and company owners should figure out a way to customize information so that it suits different decision-making processes in distinct firms.

- The management should support the implementation of a mutually interconnected and balanced MIS that treats both human employees and automated systems with respect.

- In order to stop the trend of organizations falling behind on new innovations, business entities should find a strategy to instill lessons about new MIS.

- To create a conducive working environment for MIS, firms should fully implement a well-defined decision-making system. Hence, the establishment of a single location where all company decisions are made would be an excellent place to start

• Corporate managers need to make sure they hire (or, alternatively, outsource) skilled workers who can zealously handle both MIS and the decision-making process.

In particular, it is important to stress that further study must be done in order to bring more knowledge into the public domain, despite the fact that this paper is analytically expressive. Furthermore, business owners must develop the ability to adapt to the always evolving trends in MIS and decision making, without which it will be extremely difficult to achieve progress in decision making. Finally, it is imperative to keep in mind that better decision-making is primarily intended to guarantee consumer happiness while ensuring that organizations continue to prosper in success. So, it is important to design all MIS strategies so as to meet the aforementioned business objectives.

REFERENCES

- [1] Allen, B., Heurtebise, A., & Turnbull, J. (2020). Improving Information Access. *Business Management US*. <http://www.busmanagement.com/article/Improving-information-access/>
- [2] Al-Zhrani, S. (2022). Management information systems role in decision-making during crises: case study. *Journal of Computer Science*, 6(11), 1247-1251.
- [3] Chambers, R. J. (2019). The role of information systems in decision making. *Management Technology*, 4 (1), 15-25.
- [4] Davenport, T. H., & Short, J. E. (2021). The new industrial engineering: Information technology and business process redesign. *MIT Sloan Management Review*. <http://sloanreview.mit.edu/the-magazine/articles/1990/summer/3141/the-new-industrial-engineering-information-technology-and-business-process-redesign/2/>
- [5] Demetrius, K. (2022). The role of expert systems in improving the management of processes in total quality management organizations. *SAM Advanced management Journal*. <http://www.allbusiness.com/management/591381-1.html>
- [6] Jahangir, K. (2022). Improving organizational best practice with information systems.
- [7] *Knowledge Management Review*. http://findarticles.com/p/articles/mi_qa5362/is_2_00501/ai_n21371132/
- [8] Jarboe, K. P. (2021). Reporting intangibles: A hard look at improving business information in the
- [9] U.S. *Athena Alliance*. <http://www.athenaalliance.org/apapers/Reporting-Intangibles.htm>
- [10] Kumar, P. K. (2021). Information System—Decision Making. *IndianMBA*. http://www.indianmba.com/Faculty_Column/FC307/fc307.html
- [11] Jawadekar. (2020). Management information systems: Texts and cases. New York, NY: McGraw Hill.
- [12] Kirk, J. (2021). Information in organisations: directions for information management.
- [13] *Information Research*, 4 (3). <http://informationr.net/ir/4-3/paper57.html>
- [14] Lingham, L. (2022). Managing a business/Management information system. *All Experts*. <http://en.allexperts.com/q/Managing-Business-1088/management-information-system.htm>
- [16] Rhodes, J. (2020). The Role of Management Information Systems in Decision Making. *eHow*. http://www.ehow.com/facts_7147006_role-information-systems-decision-making.html
- [17] *The Maniac*. (n.d.). Management information system: The center of management decision making. *Helium*. <http://www.helium.com/items/242575-management-information-system-the-center-of-management-decision-making>
- [18] *UStudy.in*. (2022). MIS and decision making. <http://www.ustudy.in/node/1009>
- [19] Vittal, A., & Shivraj, K. (2022). Role of IT and KM in improving project management performance. *VINE*, 38 (3), 357 – 369.