

Managerial Decision Making With The Role Of Management Information Systems (MIS): What The Literature Says

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Abstract

Management information systems used in organizations have now increased when seen from their efficiency and effectiveness. The purpose of this study is to see how the importance of the role of management information systems in managerial decision making. So that it is considered as part of a comprehensive organizational strategy. With methodology study used literature review, which has been reviewed literature review found that the overall management information systems become the major role in decision-making organization. So the results found from research, management information systems have a big and important role in managerial decision making. MIS provides information with quality that is accurate, relevant and timely. So that it helps the organization in terms of planning, control, and operational functioning. Management information systems also provide various alternative decisions when viewed from systems and situations.

Keywords: Management information system (MIS); decision making; managerial decision making.

1. Introduction

Management information systems used in organizations have now increased when seen from their efficiency and effectiveness. The initial stage of the development of management information systems aims to improve the efficiency of activities in the organization. So that it is considered as part of a comprehensive organizational strategy. The important focus of the SIM is on data collection. Because the organization is said to be successful if the quality of data collection is high. In modern times that are increasingly developing today is very dependent on information. because the information is an important resource that is needed for other resources. Information systems have a major influence on life. If the information system does not exist, many aspects of life will be affected. Likewise in an organization. Management information systems are computer-based information systems. SIM is used by managers in planning, implementing, monitoring, controlling, and evaluating information that appears in an organization. According to Al-Mamary, et al (2013) that basically, what is imagined in management information systems includes the process of collecting, processing, and storing and retrieving and communicating relevant information for the purposes of efficient and planned management operations.

There are several main tasks of information systems in an organization. One of them is supporting

decision making. The use of MIS is a modern phenomenon related to the use of the right information that will lead to better planning, better decision making and results that will be far better. This study focuses on managerial decision making. Managerial decisions are made by considering organizational goals that are tailored to the organization as a whole. Manager decision making greatly influences the survival of a company. This is where the role of management information systems is needed to achieve this sustainability.

In the article Goodhue, et. al. (1995) it was found that information systems are needed in managerial decision making. This fact can be said because if the system used in the library is uneven, it will be difficult for librarians to be able to access the needs they are looking for. Today's development also requires that companies also have to make quick changes too, on time and get the right information. This can take the form of a high-quality management information system. Because with high-quality information management information systems, the benefits obtained and felt, decision-making satisfaction and improving the quality of managerial decision making (Hars, et al., 1981). In one condition, decision making does not take long or vice versa when using an information system.

So that management information systems are needed to help managers not only collect and manage information but also represent it in various formats that are useful for management to make managerial

decisions in an organization (Mishra, et. al., 2015). Management information systems function to convert data into useful information as management reports and use it in decision making. Decision making is the basic thing to determine the failure or success of an organization. This study focuses on the character of MIS in managerial decision making in organizations. Information is the main tool of management functions which is an overall part of the meaning of achieving organizational processes. Where the main component is the database. When a database becomes part of a management information system, it is continued at the simplified data preparation stage. So that it can be said that the contribution to decision making in a company or organization is carried out with management information systems. Because according to Namani (2010) that using MIS that is effective in management decision making provides power to managers and helps the success of the organization.

2. Literature Review

2.1 Management Information System (MIS)

Management information systems continue to change and develop along with technological developments. In management information systems help lower-level management in solving problems that arise and how to overcome them. Information systems will provide solutions if their use is effective.

Now, management information systems are almost used in all organizations because of age and technology. In general, information systems aim to facilitate all activities in the organization. With the development of technology, management information systems provide the information needed by managers to manage organizations efficiently and effectively.

Management information systems refer to the system using information needed by management organizations at each level. In making tactical, operational and strategic decisions with the main goal of designing and implementing procedures, processes and routines that provide detailed reports in an accurate, consistent and timely manner (Shah, 2014).

In addition, the use of MIS for organizations in decision making has also increased. MIS refers to systems that use the information to ensure proper business management (Nowduri, 2017). Management information systems are tools available in the form of computer-based systems for managers to plan, organize, implement, monitor, control and evaluate their operations efficiently Aldarbesti & Saxena (2014). Management information systems consist of three basic components, namely: (1) system; (2) information; and (3) management.

Management information systems can also be said as a system that supports information inventory in decision making. Or integrated human and machine systems to provide information as supporting operations, management functions and decision making in organizations (Yadeta, 2016).

Management information systems are also defined as a type of information system that converts data into information in a meaningful form and is useful as a management report to use it in managerial decision making. The following is Figure 1 which shows the relationship between management information systems and decision making (Al-Mamary, 2013).

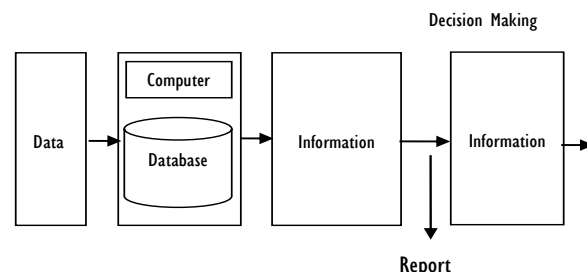


Figure 1. Relationship between Management Information System and Decision Making

2.2 Decision Making

Making is the essence of active management in all plans and results of company activities. Decisions are classified according to their situation and nature. First, a decision based on a situation is based on knowledge of results that have not yet occurred. Decision makers must know the results that will occur after making a decision to know that the decision was successful. Such knowledge is called a certainty situation. Whereas if the decision maker has partial knowledge called a risk situation.

Both decisions are based on the nature of programmed secret decisions (decisions based on rules, methods or guidelines and unprogrammed decisions (decisions are non-termistic) (Mishra, dkk: 2015). Good decision making requires good quality data and the right information time, management systems are specifically designed to provide timely information. From the management information system that are flooded with data and information is input to user process. Then the data is processed so as to produce information to achieve goals and provide alternative actions for decision making. This can be explained by the figure 2.

Decision making is the interaction between the problems that need to be resolved by the people-those who want to finish (Omarli, 2017). Decision-making is an important part of any business. this is because of

the majority of the operation in reversing decisions made by management (Singh & Kaur, 2012). Decision making refers to the mental process of choosing logical choices rather than what is available. This means evaluating and choosing from several competing alternatives. For effective decision making, managers must be able to estimate the results of each of the best options. The manager's performance in decision making has been the subject of research seen from several perspectives. Viewed from a cognitive perspective, the decision-making process is considered an advanced and integrated process in interaction with the environment. Whereas from a normative perspective, analysis of individual decisions is related to decision-making institutions and rationality and the choice of invariance he leads. Then at another level, it is considered a solution to a problem that ends when a solution is reached (Swami, 2013).

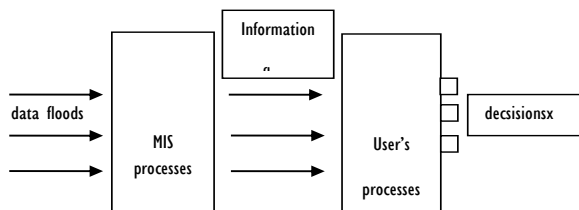


Figure 2. MIS Decision Making Process

2.3 Managerial Decision Making

Effective use of information systems in management decision making will provide power to managers and help the success of organizations (Shah, 2014). Decision making is the manager's main task. Because managers want to make the best decisions for the interests of the company by choosing alternative evaluations.

The managerial decision-making process is also influenced by four factors, namely: (1) decision-making approach; (2) type of problem; (3) conditions for decision making; and (4) decision-making style. In addition to the factors described earlier, other factors that influence managerial decision processes are personal, psychological and environmental factors (Omarli, 2017). The basis of the decision-making system is in the knowledge of decision-makers or managers about the environment which is classified into two types, namely:

1. Closed decision-making systems (decision makers operate in a known environment) with the following conditions:
 - a. Managers have a series of alternative decisions known with results full in applying values.
 - b. Managers have alternative decision models, methods and rules so that they can be produced, tested and ranked.

- c. Managers choose alternatives based on goals and objectives.
2. Open decision-making system (managers operate in unknown environments)
 - a. Decision makers do not know alternative decisions.
 - b. The results of the decision are not fully known (probabilistic).
 - c. Don't use methods, rules, or models to resolve a decision.
 - d. Difficult to determine goals and objectives.

2.4 Role of MIS in Managerial Decision Making

In relation to managers who must make decisions, the effectiveness and adequacy of decisions must be taken to achieve organizational goals. This causes decision making to involve various processes that are influenced by technology. Management information systems play an important role in decision making because they monitor themselves for disruptions in a system, determine the direction of action, and take appropriate actions to control the system (Madiha, 2014). Management information systems help managers to access information faster, compare strategic goals with practical decisions and avoid uncertain choices (Nowduri, 2017).

Management information systems provide relevant, accurate, complete and timely information that is used to facilitate decision making within an organization. Helps in planning, control and operational functions effectively and efficiently (Mishra, 2015). Management information systems produce information products that support many needs in the daily decision making of managers and business professionals (Al-Mamary, et al: 2013).

One thing that can be adopted by an organization is a well-defined decision-making system and will provide the right environment for management information systems. Costs are also considered by management managers from management information systems. Organizations must hold seminars/training for employees to help employees improve performance (Mishra, 2015).

3. Method

In this study, the method used is a literature review study. Research literature is studies that test or critically examined in the form of knowledge, ideas and findings contained in the academic-oriented literature and formulating contributions Teoritis and methodological on particular topics. The main purpose of this article is to find out the role played by management information systems in a manager's decision making.

The source of the literature review on the article was obtained from google web and google scholar as alternative search articles related to articles specifically regarding MIS variables and managerial decision making. Reference articles consist of accredited national journals and indexed international journals. In addition, this article is also based on several other secondary resources, especially from other articles published in high-quality journals and several other books. It can be said that the research in this article is the integration of previous research works with the same topic.

Some problems related to the research found will be analyzed and reviewed further in the findings and discussion section. The main problem that refers to this study is an article written by Al-Mamary (2013: 10) which states that there is no documented evaluation model to evaluate the success of a SIM. In addition, the existing IS model only focuses on technology. So there is a need to design and develop evaluation models that focus on technology and management that can be used by managers. Unlike the previous article Mishra et al. (2015) which states that decision making is the main foundation for determining organizational success or failure.

The researcher conducted a systematic literature review by gathering several theories and criticizing them by identifying and reviewing all articles that had been found. Thus, researchers focus on discussing methodologies based on literature search and then describe it descriptively.

4. Results and Discussion

A good management information system leads to good decision making in business, just as poor management information systems lead to poor decision making (Nowduri, 2017). The role of MIS is positively related to the decision-making process, but with challenges: (1) the dynamic nature of management information systems makes it difficult for some organizations to follow principles, strategies, propositions, or ideas; (2) some SIMs tend to be unable to adapt; (3) running a management information system program that is relatively expensive for some organizations; (4) management information systems are science-oriented fields, while art oriented businesses. As a result, for some people, this system is quite challenging.

Management information systems affect the managerial decision-making process. Because management information systems play an important role in providing a variety of alternative choices that are efficiently seen by decision makers can choose the

best solution. So that many managers use the help of management information systems if business choices are considered difficult (Omarli, 2017).

Alternative decisions for decision makers depend on the system and situation. This states that information systems play a role in managerial decision making. However, organizations must ensure that top management is involved so that the management information system functions smoothly (Lahar et al. 2015).

Management information systems that are important for improving decision making are also long understood by agricultural management economists. Financial records and production are used as instruments to measure and evaluate success in the agricultural business (Hars, 2011).

Management information systems are an important part of business organizations that provide accurate and timely information to business managers so that managers make the right decisions. With changes in technology management, new software is used in information systems that lead to the provision of information (Asemi, et al: 2011). Management information systems provide good quality in facilitating decision making. Assist in planning, control and operational functions to be carried out effectively and efficiently (Mishra, et al: 2015).

Management information systems are useful in the field of decision making because they can monitor themselves for disruptions in a system, determine the direction of action and take action to control the system. Management information systems are also related to the process of gathering, processing, storing and transmitting information that is relevant to supporting management operations in any organization (Ijoema, 2018).

5. Conclusion

Based on the findings of this study, management information systems have a large and important role in managerial decision making. MIS provides information with quality that is accurate, relevant and timely. So that it helps the organization in terms of planning, control, and operational functioning. Management information systems also provide various alternative decisions when viewed from systems and situations. However, management information systems can fail if their use is ineffective. So the parties in the organization must be sensitive to management information systems that if they show ineffective characteristics. Managers must also ensure that everyone in the organization receives training to ensure that the use of management information system

facilities will produce good decisions. There are still many shortcomings in research, it would be better if further research discusses the implementation of the role of MIS in the decision making of an organization in the form of a company or educational institution.

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