THE ROLE OF MANAGEMENT INFORMATION SYSTEMS (MIS) FOR BETTER MANAGERIAL DECISIONS

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Abstract
Decision-making is a cognitive process that results in the selection of a course of action among several alternative scenarios. Management in business organizations needs proper information to ensure effective decision-making. Technology brought several changes in business environment especially the way data is collected, stored analyzed and used for better decisions. MIS is some certain mechanisms that help business managers to take effective decision with the help these systems aka TIS, MIS, DSS, and ESS. This study is basically a systematic review. Approximately 40 valid and related articles were retrieved from certain reliable sources, but 25 found valid in coherent to study theme. The study found evidence in support of study proposition that MIS strictly supports managerial decisions.

Kew Words: MIS, Decision Making, Organizational Performance, Managerial Issues, Information Systems.

INTRODUCTION

Management Information Systems (MIS) is imperative to business organization owing to several reasons viz., quick and reliable referencing; the means of effective and efficient coordination between Departments; improvement in organizational and departmental techniques; access to relevant data and documents; use of less labor; management of day-to-day activities (as accounts, stock control, payroll, etc.); day-to-day assistance in a Department and closer contact with the rest of the world. Time is precious resources and MIS comes handy to play this resource at safe. The organizations are undergoing paradigm shift and employees no need to collect data manually (legacy systems). Instead, the data or information can be collated swiftly and easily into computers as in application software. The data is rising continuously and it is humongous resource today. Managing ever growing data turned out to be herculean task for business organizations. Dealing with such voluminous data which is essentially raw (unstructured) is challenging in spite of efficient mechanism s to handle the same. These growing data which in turn a burden gave rise to certain valuable platforms like data analytics, data science and engineering, big data etc. these systems not only agile but also can assist companies to maneuver massive data sets tactically. Big data is altogether a new plat form stemmed from a base known as data analytics.

Today, organizations are overwhelmed with plethora of tools to handle these data sets and gain insightful knowledge from the same this is what is, in fact, is known as knowledge management which is again a sister concept of MIS. The data which is in raw form later can be converted to information with these technologies, so technology as a tool appears to be necessary to handle ever growing data. The information so did later will be precious resource to managers. With faster access to needed information, managers can make better decisions about procedures, future directions, and developments by competitors, and make them more quickly. So, in this context, it is not extraneous to state that one of the core competencies of today's management is, of course, analytics. In otherworld's quantitative aptitude and analytical skills happened to be imperative to managers to take efficient decisions. We are living in a time of great change and working in an Information Age. 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. For an organization, information is as important resource as money, machinery and manpower. It is essential for the survival of the enterprise. In this sense, information appears to be valuable resource as like money, time and etc.

WHAT ARE INFORMATION SYSTEMS?

The systems that help organizations convert data into information are known as Management Information Systems (MIS). [1] Webopedia.com defines Management information system, or **MIS**, as a computer-based system that provides managers with the tools to organize, evaluate and efficiently manage departments within an organization.[1] MIS depends on data. Data collection requires use of Information Technology (IT) that comprises; computers and networks. Computers are important for more quantitative, than qualitative, data collection, storage and retrieval; Special features are speed and accuracy, and storage of large amount of data. Networks provide the means for one-way or two-way communication and for the transmission of messages. [2] [3] A combination of IT like telephone, computer, processor, printer, etc. is used. These technologies save lot precious resources like money and time. [4] A management information system (MIS) enables businesses to search for and handle knowledge oriented resources efficiently. MIS provides a platform to combine all the data which is created out of organization's operations. [5] [6] The widespread use of computers, many organizations found difficulties in gathering, storing,

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[1] *Retrieved from http://www.webopedia.com/TERM/M/MIS.html*

organizing and distributing large amounts of data and information. [7] [8] [9] Developments in computer technology made possible for managers to select the information they require. And this information so collected has to be accurate, concise, timely, complete, well presented and storable. Although, most firms depend on IT, but computers themselves will not improve organizational productivity. [10] [11] [12] [13] the performance pretty much depends on usage of data not merely but efficiently and effectively.

REVIEW OF LITERATURE: MIS VS. MANAGERIAL DECISION MAKING
The information system is the mechanism to ensure that information is available to the managers in the form they want it and when they need it. It is designed to support their work through providing relevant information for their decision-making. Computer systems can clearly aid organizations in the processing of data into accurate, well presented, up-to-date and cost-effective information. Wether that information is also concise, relevant, timely and complete will depend largely on the capabilities of the people involved in its processing and selection.

Reddy, G. S. (2009), did a study on Management Information System (MIS) and their impact on managerial decision making. The main purpose of this research is to know if 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. The paper states that the Management Information System (MIS) is basically concerned with processing data into information and is then communicated to the various Departments in an organization for appropriate decision-making. MIS is a subset of the overall planning and control activities covering the application of humans, technologies, and procedures of the organization. Finally the study concludes that the information system is the mechanism to ensure that information is available to the managers in the form they want it and when they need it. [14]

Milkman, K. L. *et al* (2008), did certain study as on how to improve decision making in business organizations. The study mentions that the optimal moment to address the question of how to improve human decision making has arrived. The author's also thank that fifty years of research by judgment and decision making scholars, psychologists have developed a detailed picture of the ways in which human judgment is bounded. This paper argues that the time has come to focus attention on the search for strategies that will improve bounded judgment because decision making errors are costly and are growing more costly, decision makers are receptive, and academic insights are sure to follow from research on improvement. In addition to calling for research on improvement strategies, this paper organizes the existing literature pertaining to improvement strategies, highlighting promising directions for future research. [15]

Gabriel & Obara. (2013), did a study on impact of MIS on managerial decision making. The study is basically a systematic review. The study states that the information has become an essential resource for managing modern organizations. This is so because today's business environment is volatile, dynamic, turbulent and necessitates the burgeoning demand for accurate, relevant, complete, timely and economical information needed to drive the decision-making process in order to accentuate organizational abilities to manage opportunities and threats. This paper is a reflection of amassed discourse available in literature concerning the nexus between management information systems – MIS and corporate decision-making. The paper suggests that a painstaking development and management of MIS in organizations is capable of triggering decisions that would not only be fast and accurate but would be in line with industry best practices and ultimately result in organizational efficiency and effectiveness. [16]

Breiter, A., & Light, D. (2006) studied effective IS for decision making. The aim of the study is to study about the effect of IS on decision making skills of school management. The study goes by mentioning as "national legislation that increased the role of accountability testing has created pressure to use testing data, along with other data, for instructional decision-making." Connected to this push for data-driven decision making, is the increased interest in data delivery systems or Management Information Systems (MIS) in education. But, before administrators rush to build data and information systems, we argue for a careful review of existing knowledge about information systems in the education sector in light of what business and organizational research already knows about information systems. We draw on the considerable body of business and organizational research on MIS and a recent educational case study in New York City to introduce a theoretical framework to describe the process from data to decision-making in schools. Our exploration of how schools use information focuses on the potential of new technologies and new ways of analysis to meet the information needs of educators across different levels of the system. We conclude with a discussion about critical factors for the development and implementation of effective information systems for schools: 1) Build from the real needs of classroom and building educators; 2) Recognize teachers' wealth of tacit knowledge as a starting point; 3) Select appropriate data to include in the information system; 4) Effective testing requires close alignment between standards, teaching and testing; 5) Educators need professional

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development on instructional decision-making that considers the role of data; 6) Educators need expanded repertoires of instructional strategies; and 7) Further research on effective instructional decision-making and IS support is needed. [17]

Digesara, A. N. (2013) did a systematic review on MIS. This article covers MIS Management Information Systems. Since MIS is combination of three phenomena, systems, management, and information, firstit checks these factors. Due to the significant impact of Informational Systems on MIS, Another topic of this article would be about Components of MIS management information systems that will be discussed in general later. Decision support systems (DSS), the impact of artificial intelligence and expert systems on these systems are other subjects of this article. [18]

Khan, M. E. (2011) did a conception study on MIS and its impact on organizational performance. The study states that the management information system is an integrated, uniform method for collecting and reporting information about a particular program, event or activity. The study also defines MIS as a user machine system which is used for providing information to support the operation and decision making function in an organization. MIS support decision making at all levels of the organization and also supports decision making in both structured and unstructured problem environment. In the paper authors describes about the MIS and its importance in an organization. The study also explained various types of information system and the steps involve in designing and developing of an effective MIS in an organization. [19]

Ajayi, I. A. & Omirin, Fadekemi F. (2007) did a study on MIS on educational industry. This study investigated the use of Management Information Systems (MIS) in decision-making on long term planning, short-term planning and budgeting in the South-West Nigerian Universities. The study used the descriptive research design of the survey type. Data were collected from a sample of 600 subjects consisting of 400 academic staff holding administrative staff positions and 200 senior administrative staff heading units using stratified random sampling technique. Data collected were analyzed using frequency counts, percentages, means, standard deviation and t-test statistics. The three hypotheses generated were tested at 0.05 level of significance. The study revealed that MIS was not adequately used in decision making process on long-term planning, short-term planning and budgeting. There was no significant difference between Federal and State universities in terms of the use of MIS for decision making on both long and short term planning. There was significant difference in the use of MIS for decision making on budgeting between Federal and State universities in favour of the Federal universities. It was recommended that the MIS units should be adequately financed and maintained to ensure a free flow of information and adequate use of MIS in decision-making on short term and long-term planning as well as budgeting. [20]

Fonstad, N. O. (2006) did certain study on IT engagement. The study states that Information Technology (IT) organizations have long struggled with achieving companywide strategies while simultaneously responding to urgent requests from business units to implement solutions for local projects. Study suggest that successful approaches address two fundamental goals: alignment between IT and the rest of the business and coordination across multiple organizational levels. Our IT engagement model describes these successful approaches. We define our model as the system of mechanisms that brings together key stakeholders to ensure that projects achieve both local and company-wide objectives. It consists of three general components: company-wide IT governance, project management, and linking mechanisms. This article focuses on the linking mechanisms because they are crucial but not well understood. We illustrate the model with two case studies: BT plc and Toyota Motor Marketing Europe (TMME). Both companies have distributed the risks and responsibilities of achieving company-wide objectives across multiple stakeholders and have incrementally achieved company-wide objectives on a project-by-project basis. [21]

Kornkaew, A. (2012) did certain study on implementation issues and other success factors of MIS. The study states that "during the growth of a competitive global environment, there is considerable pressure on most organizations to make their operational, tactical, and strategic process more efficient and effective." And also mention that the information system (IS) is a group of techniques which can increase the competitiveness and gain better information for decision making. Consequently, many organizations decide to implement IS in order to improve the effectiveness and efficiency of their organizations. However, a lack of awareness of numerous and varied challenging issues surrounding the implementation process could be problematic for the whole process. Furthermore, the problem of a lack of key success issues seems to be a serious obstacle for the management information system (MIS) implementation process. Additionally, MIS implementation has effects on an organization and these effects are relate d to the consequences of the business processes. Consequently, this issue is critical and crucial for an organization to consider when they implement a new MIS. The main purpose of this thesis is to present the MIS implementation challenges or problems together with identify ing the key issues to successfully achieve implement ation. Such challenges and success factors are conducted based on a research framework. In addition, this research accesses descriptions of implementation effects and consequences which impact the organization and its processes. This thesis has been conducted by studying the theory divided into three

parts including: general background literature of information systems, implementation aspects, and organizational impacts literature . The methods that were used to successfully accomplish this study were a case study of Fenix System, collecting data by personal interviews with respondents who were involved in Fenix along with internal document s. The analysis of the research framework and empirical findings has contributed to a description of the main challenges and key success issues regarding MIS implementation, together with an identification of important effects and consequences when implementing MIS. This thesis's main results show that MIS implementation is surrounded with challenges which mainly concern management, administration, and people issues involved in MIS implementation process. Additionally, it was concluded that the key issues which the MIS implementation project should be presented with primarily focused on the project team and their te am work. The last main finding is concentrated on effects and consequences and it found out that MIS implementation mainly affects business process which lead to change, for instance jobs, routines, and so forth. [22]

Olumoye, M. Y. (2013) did certain study on impact of MIS on decision making. The study states that information systems have become an integral part of every corporate organization, especially the insurance industry in facilitating decision making, planning process and the prospect of achieving organizational goals and objectives. The enormous numbers of employees engaged in the insurance sector coupled with numerous customers made decision taking and dissemination of information by the management time consuming thereby leading to inefficiency. In order to tackle this challenge it becomes imperative to introduce information systems into the management of the organization so as to facilitate decision-making. This study uses field survey responses from senior management staff of five different insurance companies to empirically examine the relationship of information systems as used by the management for decision-making, speed, availability of information and involvement of subordinates in decision-making. Simple percentage and Chi-square statistical method were used to analyze the data. However, the result of the study clearly indicated that information systems would expunge traditional, geographical and marketing limitations; hence the management of every organization is embracing information systems. [23]

Badgujar, M. (2013) did certain study on use of MIS on decision making and organizational effectiveness. The study states that in today's business world, there are varieties of information systems such as TPS, DAS, KWS, MIS, DSS, ES, CSCWS, GDSS and ESS. Each plays a different role in organizational hierarchy and decision making process. In this article the authors have selected one main information systems, namely, MIS. Management Information System (MIS) is the system, which provides the right information to the right person, at the right place, at the right time, in the right form and at the right cost to support operations, management and decision making functions in an organization. Management Information System (MIS) basically concerned with converting data from internal and external sources into information which is then communicated to managers at all the levels, inall functions to make timely and effective decisions for planning, directing and controlling the activities for which they are responsible. The information system is an integration of computer hardware/network, computer software, human beings, and manual procedures/models for analysis, planning, control and database. [24]

Ghaffarzadeh, A. M. (2015) did certain study on impact of MIS DSS on decision making. The study states that information has become an essential resource for managing modern organizations. This is so because today's business environment is volatile, dynamic, turbulent and necessitates the burgeoning demand for accurate, relevant, complete, timely and economical information needed to drive the decision-making process in order to accentuate organizational abilities to manage opportunities and threat. MIS work on online mode with an average processing speed. Generally, it is used by low level management. Decision support system is powerful tool that assist corporate executives, administrators and other senior officials in making decision regarding the problem. Management Information Systems is a useful tool that provided organized and summarized information in a proper time to decision makers and enable making accurate decision for managers in organizations. This paper discuss the concept, characteristics, types of MIS, the MIS model, and in particular it will highlight the impact and role of MIS on decision making.[25]

METHODOLOGY
This study is basically a systematic study as such it falls under the category of basic research in Approximately forty (40) scholarly articles were reviewed that are retrieved from famous data repositories like EBSCO, JESTOR, OPENOASIS (openoasis.org), ISS (iss.nl), LOC (loc.gov) EMERALD and etc. Out of forty only Twenty (20) has been used for study theme i.e., the role of MIS on managerial decision making.

CONCLUSION

Approximately 25 articles on the study theme studied. Most of those studies support use of MIS for effective decision making. Few studies finds evidence that IS are imperative to effective decision making for decisions depends on availability of information to managers. Few studies provide explanations as how MIS play important role across all types of planning activities ie.,short term to long term decision making. This information, in fact, can be channeled through MIS. There are few studies that show evidence in support that MIS lacks proper attention in organizations. There are other few studies that prescribe unconditional implementation of MIS and also states that there need to be strict links to other process of business to ensure proper decisions. There are few studies that attempt to reason that MIS helps organizations to cope-up organizational change. So, from this systematic review it is clear that there is abundant of evidence from previous research that MIS supports or ensures effective decision making and it is unequivocal.

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