

A Conceptual Framework on The Significance of Marketing Information Systems for the Development of Marketing Decisions

Sohag Datta *

Abstract

Marketing Information Systems (MKIS) is of vital importance to reach effective decisions in an organization. The literatures presented in this study explained the significant role of MKIS in the tactical planning and decision-making process enhancing the organizational development. MKIS deemed to be an integrated user-machine system that provides information to support operations, management, marketing and decision-making functions at various levels of an organization. This study highlighted that MKIS should be accessible in supplying appropriate and high quality of information from its generation to its users. This study explores the extent to which MIS implemented to make successful decisions at different organizations. It examined whether the organizations vary as to the use of MKIS leadership of decision making for strategic and tactical planning purposes. This study revealed that planning is found to have no effect on decision making, while MKIS has a clear effect on the decision making effectiveness in the organizations.

Key Words: *MKIS, Effective Decisions, ICT, Significance, Development.*

1. Introduction

Currently, organizations are in the race for enhancing their capability in order to survive in the competitions of the new century global market. Therefore, organizations are attempting to advance their agility level by improving the decision making process to be more efficient and highly effective to meet the successive fluctuations of the market. In an effort to achieve this,

* Lecturer, Department of Business Administration, Faculty of Business Studies, Dhaka International University, Dhaka, Bangladesh

many modern organizations, either mid or large sized, have concerned with a cycle of progressive investments in and adopted new management information systems components. During last decade, a high percentage of financial organizations frequently used Management Information Systems to facilitate the provision of services; and that the speed of the adoption is expected to grow further as the technology expands.

A marketing information system (MKIS) focuses on the management of information systems to provide efficiency and effectiveness of strategic decision making. The concept may include systems termed transaction processing system, decision support system, expert system, or executive information system. The term is often used in the academic study of businesses and has connections with other areas, such as information systems, information technology, informatics, e-commerce and computer science; as a result, the term is used interchangeably with some of these areas. Marketing information system is an online strategy that helps study about people, technology, organizations and executives. The conception of information catches the attention of different professionals from different fields such as computer science, economics, business and management, political science, statistics, communication and Marketing (Newman 2001). However, the question is "what type of information", How Information management can play an essential role in the Decision making. How can the coordination between internal and external sharing information at the real time accelerates and and avoids decision making errors. This study focuses on how information marketing is needed to generate planning and then decisions at both strategic and tactical levels in the organizations.

2. Origin of the Study

The Significance of Marketing Information Systems for Enhancing digital Planning and Decision Making which is most vital and one of the basic concepts of MIS, E-commerce and E-business. This study has provided researcher best effort to conduct assessment on that topic. However, researcher has worked more vigorously in internet and as well as IT department in particular of marketing area. Based on the theoretical, learning and practical experience, this study is also focuses on a mix of applied computer systems knowledge, communication and interpersonal skills, and a practical business orientation to produce graduates who have technical savvy as well as a deep understanding of business functions and processes.

3. Objectives of the Study

This study is an attempt for achievement of two major objectives of Marketing Information Systems.

A. Main Objective

The main objective of the study is to assess the current status of Marketing Information Systems.

B. Specific objectives

To obtain main objective, the other supportive objectives need to be attempted, which are –

- To point out different aspects of Marketing Information Systems in Bangladesh and overseas.
- To analyze the present status of MKIS.
- To explore the Structure and common features of MKIS.
- To find out the level of satisfaction with the available MKIS facilities.
- To identify the risk related to MKIS and to suggest some measures to overcome the problems of MKIS.
- To explore the connectivity of MKIS and digital marketing.

4. Rationale of the Study

Marketing Information Systems (MKIS) is the study of how technology can be used to solve marketing problems and create new business opportunities. The following are rationality of the study –

- MKIS has excellent problem solving skills.
- MIS helps to think strategically about technology and it has ability to manage time and resources.
- Understanding of “the big picture” as well as the “small details” through excellent communication skills can learn by this study.
- Desire to work closely with co-workers and marketing executives.
- Eagerness to accept responsibility for development and implementation of new ideas and views.

5. Scope of the Study

The Scope of Marketing Information Systems can be defined as 'The combination of human and computer based resources that results in the collection, storage, retrieval, communication and use of data for the purpose of efficient marketing operations and for business planning'.

MKIS are primarily concerned with the delivery of information (both internal and external) to organizational members from the shop floor workers to the management. The purpose of MIS is to help the smooth running of the business by providing information on the firm's data employees from different levels will then evaluate this information so that decisions can be made to ensure that the business remains competitive and successful. MIS have been created to support the whole range of business's administration and regulatory activities and can be seen in all parts of the world and in all types of industries both public and private sector. MIS exist in organizations in order to help them achieve objectives of digital marketing for 21st century, to plan and control their processes and to help deal with uncertainty.

6. Literature Review

Whitten et al. (2004, p.12.), stated that "information is an arrangement of people, data, process, and information technology that interact to collect, process, store and provide as output the information needed to support an organization," which indicates that information system is an arrangement of groups, data, processes and technology that act together to accumulate, process, store and provide information output needed to enhance and speed up the process of decision making. In a Bank's information system, there is always a potential crisis which makes the bank endure an insufficiency; thus, an advanced information system supported by a superior mechanism control is required to make certain that an information system has achieved the required processes. If the relevant information required in a decision-making process or an organization planning is not available at the appropriate time, then there is a good change to be a poor organization planning, inappropriate decision-making, poor priority of needs, and defective programming or scheduling of activities (Adebayo, 2007).

For centuries, marketing information systems was not given much attention and this has led to the liquidation of many organizations. However, awareness of information technology in the present age has made information system more accessible, thus integrating organizational structures for the achievement of goals and objectives in within a relatively short period. The emergence of the new technology science of electronic data processing has provided the impetus for study into the development of marketing information and a new approach in the study of control, feedback system and communication. The introduction of electronic technology into the marketing information systems has made the information system more effective and efficient. But that is not to conclude that all organizations or managers have effective managerial capability to manage information system. It is evident that as organizations expand, the problem associated with data collection, recording, information

retrieval and effective communication increase in proportion to the size of the organization. These are major areas where organizations or marketing managers have to be more effective in managing information as this may have nothing to do with the number of technology acquired or money invested.

Information is essential for the endurance of a financial organization in the global and competitive market. The nature of globalization and competitiveness in the market stress on the importance of developing an organization capability through better enhancing MKIS. Accordingly, the stored information must then be recalled and distributed for the use of an organization leadership and top management as well as mid-level managers to take effective long term (strategic) and short term (Tactical) decision-making. MKIS deemed to be a system which provides organizations top management and, even lower level management, with appropriate information based on data from both internal and external sources, to allow them to make effective and timely marketing decisions that best achieve their organization goals and satisfy stakeholder requirements (Argyris, 1971, p. 291).

Ordinarily, information is not useful if it is not accurate, complete, relevant effective and efficient. In order to achieve all these, the marketing information systems in an organization needs to determine information needs, establish system goal, determine hardware needs, acquire equipment, integrate hardware and operating system; install controls, develop documentation and train users, test system and made appropriate modification and monitor system effectiveness and make appropriate modification.

6.1 Concept of MKIS

MKIS is “A structured, interacting complex of persons, machines and procedures designed to generate an orderly flow of pertinent information collected from both intra and extra-firm sources for use as the bases for decision making in specific responsibility areas of marketing management (Brien, 1992). MKIS is: “A marketing information system is a continuing and interacting structure of people, equipment and procedures designed to gather, sort, analyze, evaluate and distribute pertinent, timely and accurate information for use by marketing decision makers to improve their marketing planning, execution and control (Kotler & Armstrong, 2008).

The purpose of MKIS to-

- Understanding the need for decision or the opportunity,
- Preparing alternative course of actions,

- Evaluating all alternative course of actions,
- Deciding the right path for implementation.

MKIS is an information system that provides information in the form of standardized reports and displays for the managers. MKIS is a broad class of information systems designed to provide information needed for effective decision making. Data and information created from an accounting information system and the reports generated thereon are used to provide accurate, timely and relevant information needed for effective decision making by managers. It provides information to support marketing decision making with the following goals:

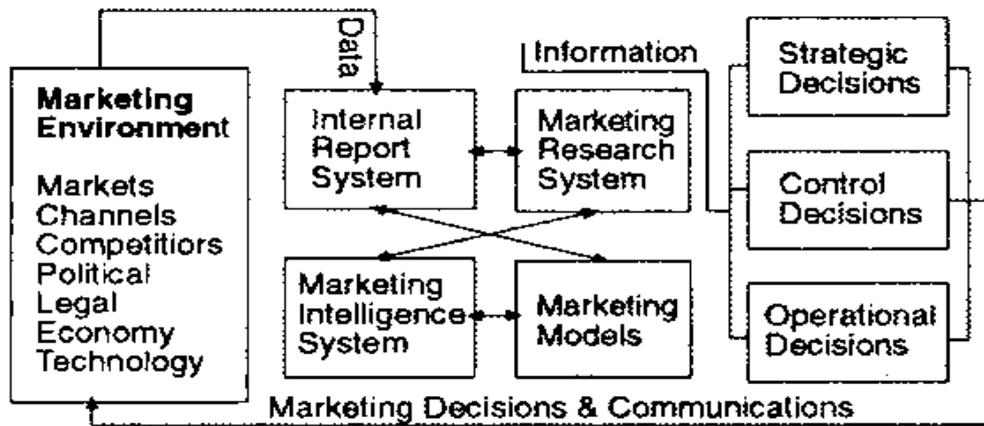
- Pre-specified and preplanned reporting to marketing managers.
- Interactive and ad-hoc support for decision making for improve sales volume.
- Critical information for top management for new product development.
- Enhancing e marketing for digital Bangladesh.

MKIS of vital importance because:

- It emphasizes on the digital marketing decision making, not only processing of data generated by business operations.
- It emphasizes on the systems framework that should be used for organizing information systems applications.

6.2 Components of a marketing information system

A marketing information system (MKIS) is intended to bring together disparate items of data into a coherent body of information. An MIS is, as will shortly be seen, more than raw data or information suitable for the purposes of decision making. An MKIS also provides methods for interpreting the information the MIS provides. Moreover, as Kotler's¹ definition says, an MKIS is more than a system of data collection or a set of information technologies.

Figure 1: components of an MKIS

Source: I. M. Crawford. (1997), Marketing Research and Information Systems (Marketing & Agribusiness Texts)

Internal reporting systems: The internal records that are of immediate value to marketing decisions are: orders received, stockholdings and sales invoices. These are but a few of the internal records that can be used by marketing managers, but even this small set of records is capable of generating a great deal of information. Below, is a list of some of the information that can be derived from sales invoices?

Marketing research systems: The general topic of marketing research has been the prime ' subject of the textbook and only a little more needs to be added here. Marketing research is a proactive search for information. That is, the enterprise which commissions these studies does so to solve a perceived marketing problem. In many cases, data is collected in a purposeful way to address a well-defined problem (or a problem which can be defined and solved within the course of the study). The other form of marketing research centers not around a specific marketing problem but is an attempt to continuously monitor the marketing environment. These monitoring or tracking exercises are continuous marketing research studies, often involving panels of farmers, consumers or distributors from which the same data is

Marketing intelligence systems: Whereas marketing research is focused, market intelligence is not. A marketing intelligence system is a set of procedures and data sources used by marketing managers to sift information from the environment that they can use in their decision making.

Role of computer in marketing operations

The main role of computer in marketing operations is summarized as follows: forecasting, planning, control, modeling, systems analysis and facilities offered by the data base.

Forecasting: Computer can perform such historical analysis as below speedily which may be difficult or even impossible manually.

- I. Data smoothing by means of moving averages or weighted, moving averages (including exponent smoothing) to disentangle the underlying trend from amidst irregularities.
- II. Seasonal analysis, economic activity varies with reasons, viz. sales of ice cream. The seasonal analysis can be used to compute the seasonal indices.
- III. Cyclical Analysis. Cycle of booms and depressions can be discerned factoring an economic time series into trend, seasonal, cyclical and error components.
- IV. Correlation and regression analysis. Such relationship at the variance of sales is proportional to the mean sales etc. can be discovered. Multiple regression analysis involves a great deal of calculation and computer would be particularly useful here.

Planning: Planning can be done more frequently and even continuously. Because of constraints of computational and data processing abilities in manual systems, it used to be the practice to set reorder level annually. Important demand fluctuations were thus ignored resulting in higher stocks and poorer service than is possible now in computerized systems where reorder levels can be revised much more frequently. Eilon reports 40% savings in stock holding for the same service by periodically revising reorder levels on the basis of his extensive simulation experimentation.

Modeling: Modeling can be tested for robustness or in conglomeration against historical or hypothesized data by simulation or otherwise. Sensitivity analysis can be performed to see to what extent the input variable affects the output variables. Computers can also assist in model building to sort out relationships.

6.3 Importance of MKIS for Enhancing Marketing Decision

MKIS has assumed all the more important role in today's environment because a manager has to take decisions under two main challenges:

First, because of the liberalization and globalization, in which organizations are required to compete not locally but globally, a manager has to take quick decisions, otherwise his/her business will be taken away by competitors. This has further enhanced the necessity for such

a system. Secondly, in this information age wherein information is doubling up every two or three years, a manager has to process a large voluminous data; failing which he may end up taking a strong decision that may prove to be very costly to the company.

On the other hand, the MKIS which is not adequately planned for analyzed, designed, implemented or is poorly maintained may provide developed inaccurate, irrelevant or obsolete information which may prove fatal for the organization. In other words, organizations today just cannot survive and grow without properly planned, designed, implemented and maintained MKIS. It has been well understood that MKIS enables even small organizations to more than offset the economies of scale enjoyed by their bigger competitors and thus helps in providing a competitive edge over other organizations. The following are some of the benefits that can be attained using MKIS.

- Companies are able to identify their strengths and weaknesses due to the presence of revenue reports, employees' performance record etc. Identifying these aspects can help a company improve its business processes and operations.
- MKIS helps managers to recognize marketing trends. The changing trends may be in respect of prices, product design, packaging, promotion schemes, etc.
- Effective market planning is required in terms of product planning, pricing, promotion and distribution. Such planning will be possible only if the company is possessing adequate and relevant information
- MKIS can help a company gain a competitive advantage. Competitive advantage is a firm's ability to do something better, faster, cheaper, or uniquely, when compared with rival firms in the market.
- Every aspect of marketing, there is need to make constant and correct decisions. A properly designed marketing information system promptly supplies reliable and relevant information. With the help of computers and other data processing equipments, the marketing managers can make the right decisions at the right time.
- The role of the MKIS in an organization can be compared to the role of heart in the body. The information is the blood and MKIS is the heart.
- Firms, which are largely decentralized can gather information which is scattered at many centers or departments and integrate it for effective decision making. Such integration is possible if there is a centralized MKIS.
- The MKIS helps in strategic planning, management control, operational control and transaction processing.

- A business firm may be handling or marketing a wrong line of products. As such the company will not be able to make profits. And if it does, profits may not be adequate. A firm which is well equipped with MKIS will be able to realize the need to change the line of business.
- There are number of business opportunities which have remained untapped for various reasons are due to unavailability of sufficient information. MKIS makes it possible to tap business opportunities as it can supply required and reliable data.
- The MKIS helps the top level management in goal setting, strategic planning and evolving the business plans and their implementation.

6.4 Development of MKIS for Marketing Decision

The role of Marketing Information Systems is described and analyzed 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. 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 key consideration, Marketing 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.

Suidan (1994) explained that in the last century has been one of the major changes within most sectors of society. Technological advances, increased customer service requirements, and the globalization of the marketplace are about a few of the factors that have contributed to greatly intensified business competition. For organizations competing in today's rapidly evolving business environment, information has become a critical resource. Indeed, market intelligence has become the cornerstone of any successful marketing plan. The more cautious and professional a person is, the better the person gets an assurance of positive prospects of in MKIS with regards to decision making and other related areas of business. Furthermore, marketing information systems stated regarding businesses act as guidelines to business owners for making critical decisions. As a result, managers and key decision makers are bridled from overstepping their boundaries or exceeding their business mandate. This is very crucial as it helps in keeping businesses checked and balanced thus ensuring that only proven

decisions are considered while the untried ones are thwarted. More importantly, the capacity to guide decision-making facilitates progress and improvement of the operations in a company. Despite the positives associated with the role of MKIS in decision making process; there are a few challenges that are believed to limit the efficacy of MKIS. These include:

- a. The dynamic nature of MKIS makes it difficult for some organizations to keep up with the principles, strategies, propositions or even ideas.
- b. Different situations call for different decisions to be made. This poses challenges to MKIS theorists since some MKIS tend to not be adaptable.
- c. The institutionalization, programming, monitoring and evaluating MKIS requires a lot of expertise-something which numerous organizations lack.
- d. The running of MKIS programs tends to be relatively costly for some organizations—especially small ones who are not well-endowed financially.
- e. MKIS 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.
- f. Most organizations do not have a well-defined decision making system. So even with the right MKIS tools, very little can be achieved in terms of improving decision-making.

7. Methodology of the Study

Here given the procedure used for data collection. During the research only secondary data was used. This study has been conducted using a combination of qualitative research design. This paper is based on secondary data sources. The secondary sources of information have collected from various publications of e-marketing, MKIS, e-business, e-commerce, online marketing strategies, journals, books, newspapers, magazines, exhibition, fair and websites.

8. Limitations of the Study

The study would have been more informative & purposeful if some more time was given. All the things in the world must have some limitations and drawbacks. The study faces some limitations which are as follows:-

- a. The MKIS as good as its design-MKIS if designed in an improper manner does not serve the marketing and hence is of little relevance.
- b. The MKIS is as good as its users-if the users do not know how to leverage the information available from MKIS then MKIS is of little use.

- c. The MKIS is no good if the basic data is obsolete and outdated (for example, MKIS will only facilitate garbage with information and in about garbage-out-process).
- d. Highly sensitive and requires constant monitoring. Budgeting extremely difficult and lack of flexibility to update itself.
- e. Lots of time required to construct or prepare MKIS and constant training required. In depth study or required training has to be carried out before designing the software.
- f. Difficult to adapt in new settings for human resource i.e. Employees, executives.
- g. The expense to create and implement an MKIS and training time for employees,
- h. Capturing wrong or incomplete information. Sometimes when the information is wrong, it create chaos in organization.

9. Findings of the Study

Marketing Information Systems is the study of how technology can be used to solve marketing problems and create new business opportunities. The MKIS program focuses on a mix of applied computer systems knowledge, communication and interpersonal skills, and a practical business orientation to produce graduates who have technical savvy as well as a deep understanding of business functions and processes. MKIS may be right for you if you have the right stuff, including:

- Excellent problem solving skills
- Ability to think strategically about technology
- Ability to manage time and resources
- Understanding of “the big picture” as well as the “small details”
- Excellent communication skills
- Desire to work closely with co-workers
- Eagerness to accept responsibility for development and implementation of new ideas.

The following are some of the benefits that can be attained using MKIS.

- Companies are able to identify their strengths and weaknesses due to the presence of revenue reports, employees' performance record etc. Identifying these aspects can help a company improve its business processes and operations.

- Giving an overall picture of the company.
- Acting as a communication and planning tool.
- The availability of customer data and feedback can help the company to align its business processes according to the needs of its customers. The effective management of customer data can help the company to perform direct marketing and promotion activities.
- MKIS can help a company gain a competitive advantage. Competitive advantage is a firm's ability to do something better, faster, cheaper, or uniquely, when compared with rival firms in the market.
- MKIS report help to take decision and action on certain object with quick time.

10. Recommendations of the Study

Marketing Information Systems is of paramount importance to reach effective marketing decisions in an organization. The literatures presented in this study explained the significant role of MKIS in the decision-making process enhancing in an organization.

- a. MKIS is deemed to be an integrated user-machine system that provides information to support operations, management and decision-making functions at various levels of an organization. Organizations are aware that MKIS is a special-purpose system useful for management objectives. To MKIS, to be vital and effective, a carefully conceived, designed and executed database should exist to communicate the adaptive decisions.
- b. MKIS was not very adequately implemented for decision making on strategic and tactical planning in Bahrain banks. Although there are in the use of MKIS for decision-making processes, the results revealed that the effectiveness of decision making.
- c. It is therefore recommended that the MKIS units should be adequately maintained to ensure the free flow of information and adequate use of MKIS in decision making in Strategic and Tactical Planning.
- d. The study also recommends that a proper orientation should be conducted in order to help managers at all levels as to ensure proper and adequate use of MKIS facilities in generating and disseminating information for better marketing decisions.
- e. To be successful, an MKIS should be designed and operated related to organizations, management and technical factors. The study encourages the organizations' top management to participate in enhancing MKIS and make an effective contribution to system design.

- f. The information specialists (including systems analysts, designer, ICT personnel, accountants and operations researchers) should cooperate and become more conscious and aware of marketing functions needs so that more effective MKIS is developed.
- g. Organization thus would be aware that what is required is an awareness and understanding of key principles and functions in which the design, implementation and operation of MKIS are the results of rational decisions rather than haphazard development without considering the real organizational needs.
- h. Finally, the study believes that to enhance MKIS, banks or any organization that use MKIS to enhance its decision making processes should develop effective communication channels between management and information professionals.

11. Conclusion

Marketing Information Systems are sets of inter-related procedures using information system infrastructure in a business enterprise to generate and disseminate the desired information. Such systems are designed to support decision-making by the people associated with the enterprise in the process of attainment of its objectives. The MKIS gets data and other resources of IT infrastructure as inputs from the environment and process them to satisfy the information needs of marketing people associated with the business enterprise. There are subsystems of control over the use of IT resources and feedback system offers useful clues for increasing the benefits of information system to business. The MKIS are subsystem of business system and by themselves serve the function of feedback and control in business system. In this report, attempts have been made to examine the MKIS, its problems and importance in an organizational setting. One may conclude that MKIS is the lifeblood of any organization. Both public and private sectors must be committed to seeking formal or organized information before taking decisions. Marketing problems will be provided with specific answers through computer simulations and gaming techniques. Today's marketing managers must be careful, as they can become inundated with only marginally relevant facts rather than be presented with concrete and absolutely useful information. This situation can be avoided where a virile and functional MKIS unit is put in place.

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