Management Information System - Essential System on Augmentation of Business Performance

MSc AFËRDITA QEKAJ-THAQI, PhD candidate
Economic Sciences-Management Information Systems
European University of Tirana
Tirana, Albania

Abstract:

Nowadays, running a business successfully means having broad knowledge and distinctive abilities covering majority of areas surrounding the environment which enterprises are part of. Literally, being competitive obviously it takes so much time and efforts finding the proper "weapon" combating competitors. part of Entrepreneurs are mindful of rapid market changes pushing them digging deep and mulling over for creative and useful strategy that enables them staying firmly on the market. Being aware of speedy and revolutionized pace of doing business, owners, CEO-s, head managers and others decision makers started focusing on what increases their incomes, earnings, prominence, and stability of company. Goal of entrepreneurs, assumedly even back in times, was to assemble important pieces by completion of which being able to create an easy stream within the entity operating easily and successfully. Creating a solid business, information technology is an important feature facilitating attempts of doing so. On the other hand, managerial abilities are joining part of synergy for a well-organized enterprise. Both, information and management interact creating a perfect collaboration for an excellent operational strategy that conquer obstacles towards achievement of short and long term business goals. Apart from old days, in today's sophisticated information technology provides facilities on doing business that make uncomplicated flow of information through channels of communication inside and outside the organization. An vital information system supplying crucial information to the

management providing relevant gathered information on effective planning, controlling and decision making for augmentation of business performance, undoubtedly is Management Information System known as MIS.

Key words: MIS, business; augmentation; management; performance decision

1. INTRODUCTION

Management information system is also considered as a "nervous system of business." It takes collective view and inter-locks all sub-systems which usually operate internal the organization. MIS assists on development of adequate resources for the company and gets rid of human and organizational barriers from ongoing advancement (Knowledge flow, 2014).

MIS in nowadays' has become a valuable tool in decision making. The use of computers and other similar gadgets has spread across all the functional areas, divisions and departments of an organization. Information Technology with its accessory tools, such as computer among others, has become a major driving force in all sorts of business activities. Information system management has made a crucial impact in organizational development. Competition has taken a new direction in business environment, so the word "competition advantage" has changed its definition in the era of globalization. Today's society has evolved as internet society resulting on new emerged areas consumer relationship management, supply chain management, knowledge management and so on. It ultimately lead to new developments in the areas of information technology as well as information management (Chatterjee, 2010).

Management information systems are usually organized around the functional areas of organization. These functional areas of organization commonly include some major divisions

which are pillars of business, and those are: human resources, finances, marketing, manufacturing, supply, sales and so on. At each of those areas-divisions MIS application has an crucial impact on integration of specific information from multiple sources, alleviating analyzing processes, supporting miscellaneous activities inside the organization, assisting on monitoring production processes, having clear view upon sales and many other significant functions (Zandbergen). MIS is a planned system of the collecting, processing, storing and disseminating data in the form of information needed to carry out the functions of management (Kant, 2011).

Significance of paper illustrates facts about the importance of MIS on augmentation of business performance in contemporary business world. Displaying various valuable ideas and cases revealing true values of system MIS, paper provides clear picture how information technology can influence on efficiency of a business. Competitive advantage due to the proper usage of technology in management is among issues shown. Meanwhile, paper mirrors blending of technology embedded into daily managerial activities which combination yields to a hiking in revenues derived from proper utilization of Manager Information System on decision making on their daily operations.

2. DEFINITIONS OF MIS

MIS's focal point is providing efficiency and effectiveness at company's decision making process aiming to increase output or turnover, though, numerous definition could be read each of them attempting to explain or extract the best possible what MIS is about. According to Lucey (2005) there is no universally accepted definition of an MIS and those existing reflect the emphasis and - prejudices- of the particular writer. The term MIS has become almost synonymous with computer based data processing and in fact many books turn out to be exclusively

concerned with topic such as system analysis file design and various technical facets of computer based system. He, Lucey, furthermore defines MIS as a system using formalized procedures to provide management at all level in all functions with appropriate information, based on data from both internal and external sources to enable them to make timely effective decisions for planning, directing and controlling the activities for which they are responsible.

Meanwhile, definition of Gopal (2008) for MIS is: Management Information System means modern computerized systems continuously gathering relevant data from inside and outside the organization. This data is then processed, integrated, and stored in a centralized database (or data warehouse) where it is constantly updated and made available to all who have the authority to access it in a form that suits their purpose.

An information system is a set of interrelated components that collect (or retrieve), process, store and distribute information to support decision-making in as organization (Laudon and Laudon 2004, at Hejden, 2009). So, an information system takes data as input and processes it into output information for the benefit of decision-making (Hejden, 2009).

Jeffrey about MIS states that: An information system is a computer system that provides management and other personnel within an organization with up-to-date information regarding the organization's performance; as for instance - current inventory and sales. It usually is linked to a computer network, which is created by joining different computers together in order to share data and resources. MIS is designed to capture, transmit, store, retrieve, manipulate, and or display information used in one or more business processes. These systems output information in a form that is useable at all levels of the organization: strategic, tactical, and operational.

Even though list of definitions about MIS could be pretty lengthy, I'll sum-up as followings: A management information system (MIS) is a system or process which provides information needed to manage organizations effectively. Management information systems are regarded to be a subset of the overall internal controls procedures in a business, which cover the application of people, documents, technologies, and procedures by management accountants to solve business problems such as costing a product, service or a business-wide strategy. Management information systems are distinct from regular information systems in that they are used to analyze other information systems applied in operational activities in the organization. Academically, the term is commonly used to refer to the group of information management methods tied to the automation or support of human decision making, e.g. Decision Support Systems, Expert systems, and Executive information systems (Kant, 2011).

3. CHARACTERISTICS OF MIS

Management information systems are distinct for abundant characteristics/features, and main are:
- The MIS supports the data processing functions of transaction handling and record keeping,
- MIS uses an integrated database and supports a variety of functional areas,
- MIS provides operational, tactical and strategic levels of the organization levels of the organization with timely, but for the most part structured information,
- MIS is flexible and can be adapted to the changing needs of the organization (Gupta & Malik, 2005).

Besides, MIS characteristics can be explained also with relevance which MIS has to relate to the decisions the manager has to take. An effective MIS takes data that originates in the

areas of activity that concern the manager at any given time, and organizes it into forms that are meaningful for making decisions.

Accuracy as a key measure of the effectiveness of an MIS is the reliable of its information. The accuracy of the data it uses and the calculations it applies determine the effectiveness of the resulting information. The sources of the data determine whether the information is reliable and also serves as a good measure of the accuracy and reliability of its output.

Timeliness helps to the management to make decisions about the future of the organization based on the data provided from the past. The more recent the data, the more these decisions will reflect present reality and correctly anticipate their effects on the company (Markgraf).

Apart from characteristics mentioned above, I'll glimpse over other MIS features:

Management oriented - as Gupta (2011) emphasizes, the system is designed from the top to work downwards hierarchy of company or business. It doesn't mean that the system is designed to provide information directly to the top management, however, other levels of management are also provided with relevant information. System is designed, also, keeping or nourishing top level management with data on external competition, market and its movement such are competition activities, for instance, which data provides sufficient information on creation of prices for competitive purposes and sales augmentations. While (Thakur) says that for designing of MIS top-down approach should be followed. Top-down approach suggests that the system development starts from the determination of the management needs and overall business objectives. Management oriented characteristic of MIS also implies that the management actively directs the system development efforts.

Management   directed- it is necessary that management should actively direct to the development efforts.

Aiming to ensure the effectiveness of the system designed management should make reviews continuously by receiving important information as it for sales, for instance, in order to improve control over the marketing operations.

Integrated- the system has to cover all functional areas of an organization in order to produce more meaningful information with a vision to achieve the objectives of the organization. In this case, various subsystems has to be considered - their objectives, information needs, and recognize the interdependence these subsystems have among themselves so that common areas of information are identified and processed without repetition and overlapping (Gupta, 2011).

Need based -MIS design and development should be suited as per the information needs of managers at different levels that are strategic planning level, management control level and operational control level, and so on.

Future oriented- MIS should be designated the future of the company. In other words MIS should not merely provide past or historical information, rather it should provide information on the basis of projections based on which actions may be initiated.

Common data flows- Because of the integration concept of MIS, there is an opportunity to avoid duplication and redundancy in data gathering, storage and dissemination. System designers are aware that a few key source documents account for much of the information flow. For example, customer's orders are the basis for billing the customer for the goods ordered, setting up accounts receivables, initiating production activity, sales analysis, sales forecasting (Thakur).

Flexible- A management information system is flexible and is designed to allow the integration of additional components. It automatically updates key processes and software components to include the latest trends, practices, technologies and information. Management information systems are flexible in terms of data analysis and evaluation,

and are programmed to study and analyze data from various different angles. They are also capable of supporting a wide range of knowledge and skills (Gilani). While building an MIS system all types possible which may occur of the future are added to make system flexible. By flexibility, MIS should enable all features being incorporated that will make it readily accessible and easy handled to a wide range of users (Gupta, 2011).

Provides Organizational Support- MIS provides support at various levels of management. It is designed to support classic managerial functions of planning, organizing, decision making, coordinating and controlling at various levels of an organization (strategic, tactical and operational). A management information system defines goals, policies and the aims and objectives of the organization for the strategic level. It provides information on resources, acquisition tactics, new products, plant locations and budgets for tactical planning and basic management control. It defines how best to use existing resources and facilities to carry out all organizational activities within the stipulated budget. A management information system allows managers to effectively accomplish tasks by establishing streamlined interpersonal communication channels (Gilani).

4. FUNCTIONS OF MIS

Talking about MIS functions, it may be needed to mention many areas that system covers. In common, MIS is set-up by an organization with the main purpose obtaining management information that is going to be used by its managers in decision-making. MIS must perform the following functions in order to meet its essential objectives such are:

Data Capturing: Management Information Systems captures data from various internal and external sources of an organization. Data capturing may be done manually or through

computer terminals. End users, as illustration, typically record data about transactions on some physical medium such as paper form or enter it directly into a computer system.

Processing of data: The captured data is processed to convert into the required information prepared for management. Activities through data processing pass is done by calculating, comparing, sorting, classifying and summarizing.

Storage of information: Management Information Systems stores processed or unprocessed data for organization's future use. In case of any information is not required at once, it is saved as an organizational record for later utilization. During this activity, data and information are kept in an organized manner for possible later use. Usual organization of stored data is set into fields, records, files and databases.

Retrieval of information: Management Information Systems retrieves information from its stores depending on demands by various users. As per the requirements of the management users, the retrieved information is either dispersed as such or it is processed again to meet the exact demands.

Dissemination of MI: Management information, finished product of MIS, commonly is disseminated/dispersed to the users within the organization. Dissemination could be periodic, through reports/information or it may be on-line via computer terminals (Thakur).

5. ROLE OF MIS

The role of MIS in an organization can be compared to the role of the heart in the body. In this case, the information is the blood while MIS is the heart. As in the body the hart plays role of the supplying pure blood to all the elements of the body including the brain that makes a person living normal. Similar to the blood in the humans body, MIS plays the same role in the

organization. Above all, the MIS system ensures that an appropriate data is collected from various sources, processed and sent further to all needed destinations- divisions, departments or any other levels within the organization. Anticipation from the system are to fulfill the information needs for and individual, group of individuals, managers, shareholders or even CEO's. MIS satisfies diverse needs through a variety of systems such are query systems, analyses systems, modeling systems, decision support systems. Above all, MIS offers support in strategic planning, management and operational control, also in transaction processing. Besides, MIS helps top management in goal setting, strategic planning and evolving the business plans in addition to their implementation. MIS provides crucial support and help to all crew and personnel of organization from top-down and vice versa. It plays a major role of information, communication, problem identification and processes of decision making (Gupta, 2011).

About the role of MIS in organization, based on (Oke, 2009), he asserts that Management Information System has become very necessary system due to the ongoing increasing business and management complexities. Those business and managerial complexities may occur on routine bases and some could be encountered a bit rarely, anyway, whenever the emerge, consequences of it may generate continues problems within the company or organization from down-top level or conversely by jeopardizing and making a breach on organization workflow/work-stream. Complexities, hence, require not only quantitative but qualitative decision making. Therefore, all managers regardless level they belong to, are compelled taking the best decision under pressing conditions of risk, certainty and uncertainty. A good manager is distinct of his/her decision makes with result on minimization if not complete elimination of risk and vagueness created from complexities. Under those circumstances role of MIS is very

much helpful on alleviating to the managers precisely doing the proper act- making a right decision.

MIS plays a very important role in any organization and having very wide scope because Management Information System study whole information about society and individual. To be shown and clarified the way MIS, it can be seen on four different layers as depicted in pyramid structure - figure 1:

Fig. 1- Pyramid Structure of MIS
Source: (Management Information System- Knowledge Flow, 2014)

Description for every level or layer and their meaning as part on creation of pyramid, are given below:

First layer- represents layer consisting information for transaction and inquiry processing.

Second layer - consists information needed for day to day performance of activities and also their control.

Third layer - is made of information required for decision making and tactical planning at middle level management for the level implementation of top level management policy.

Fourth layer - consist of information required for strategies and policy planning (Knowledge Flow, 2014).

6. IMPACT OF MIS ON BUSINESS PERFORMANCE AUGMENTATION

The impact of MIS on the functions of management is distinctive due to the important role it plays on acceleration of

entire organization workflow, functions, performance and productivity. A good and appropriate MIS supports many departments or divisions within the organization/business on efficiency such are marketing, finance, production and personnel. Tracking and monitoring the functional targets becomes easy with MIS. The functional managers are informed about the progress, achievement and shortfalls on activity and the targets. Such information provide to managers certain indications for the trends or problems in various aspects of business. Similar information assists to the managers in precise forecasting and other short and long term planning. A disciplined information reporting system creates a structured database and knowledge base for all the people in the organization. Every information related to the company in such form which can be used straight away or by blending and analyses, saves the mangers' and rest of the crew precious working time. The MIS creates also another impact in the organization which related to the understanding of the business itself. It calls for a systemization of the business operations for an effective system design which heads to streamlining of the operations complicates the system design. Moreover, MIS impacts on improving the administration of the business by bringing a discipline in its operations as everyone is required to pursue and use system procedures. This entire process brings a high degree of professionalism and impact directly to improved business operations (Jawadekar, 2013).
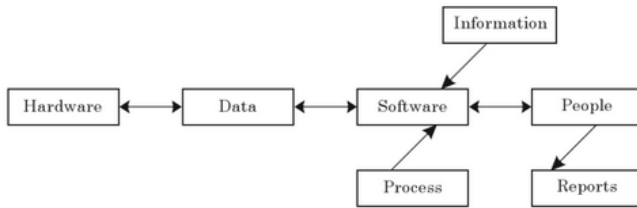
Management Information Systems have a major impact on the utilization of physical, human and financial resources of a productive system. It can influence on the organization functions, performance and productivity. In any business organization all the managerial tasks in terms of functional, materials, manufacturing, human resources, R&D with a good MIS support, all managerial tasks become more efficient. Also, understanding of the capabilities and limitations of information technology will enable management to direct and measure its

contribution system objectives. The impact on the managerial ability is improved as managers can use variety of tools for modeling, simulation, decision making and other useful purpose, so this spares manager's time which can be utilized for creative thinking, problem solving and above all improve the efficiency of entire company's personnel (Bagad, 2009).

7. RESOURCES AND COMPONENTS OF MIS

MIS as a system operates by collecting and assembling pieces of information prepared from different sources which in this case depending on the organization or business they may absorbed from couple or more departments or divisions. Flow of information from one department to next one, is part of structure of organization, thus importance of coherence through which information flows starting from source up to the destination or aimed target, it matters the most. Information inside the MIS can be managed by manual process, also. Ever since computerization has taken place everywhere even in small businesses and organizations, in today's information flow is done chiefly by computers. MIS resources are among most import part of the system, and components which are used as resources in Management Information System are:

1. Computer hardware,
2. Computer Software,
3. Data and information,
4. Process,
5. Man power,
6. Consumables (Chatterjee,2010).

Management Information Systems (MIS) components.

Fig. 2- Components of MIS
Source: (Management Information System- Chatterjee,2010)

8. BENEFITS OF MIS

Since MIS is integrated into managerial functions, it sets clear objectives to ensure that system focuses on the major business issues making development of adequate resources to be provided and human and organizational barriers being removed, though. MIS impacts on business overall performance due to its continues surveillance. From information obtained MIS supports management and other eligible personnel within the organization detecting critical and crucial factors by understanding and estimating the complexity of business stream or any of other possible problems occurred or barriers that may be erected meantime. Such operation situation can be soothed with the MIS where decision makers can go back by tracking the source of the problem, seeing the way it occurred and responding with appropriate action in aspects of keep controlling inputs, working process and output which can lead to sufficient correction of organization performance.   Hence, benefits of utilizing MIS are plenty. System provides continues business development and performance improvement, it eases company to determine critical success factors, assist on business strategy development, identification of business goals, critical business applications, and more important MIS makes possible information to be indentified in order entities to make faster and proper business decisions on their path towards success (Jawadekar, 2013).

While, besides aforementioned facts about the benefits of MIS usage, based on detailed description obtained by (Gupta, 2011), additional benefits of the system are:

- *Aiding in decision making* - by information distribution to all levels managers makes them able to make prompt, timely and accurate decision. Meanwhile, head management and board of members can take strategic decision, make forecasting and future plans for business expansion or growth everything thanks to data and information generated by MIS.

- *Better planning and control* - MIS is designed and managed in such way so it aggregates information, monitors the company's activities and operations, meanwhile it increases communication and collaboration among personnel. This ensures netter planning for all activities and witty ways to gauge performance, resources to be properly managed, it facilitates compliance with industry and government regulations.

- *Core competencies* - system provides necessary utensils to be more knowledgeable and get closer by understanding much better the market and its company position amid others on the competitive market.

- *Quick reflexes* - MIS enables company reacting more swiftly to the environment they are part of, make them taking a move forward by offering better products or services.

CONCLUSION

Every singular business dreams to proliferate either on short or long term. Undisputedly, organization or companies are in business to increase their capital and wealth. Endeavors reaching such goal are endless, thus, seeking new prosperous paths is common feature for business worldwide. Information Technology, apparently provides alleviations for businesses to catch up and get chances for progress. Since first days of

information technology application in the business, managing got relied and has become "depended" on it. The new reality has made business people sliding slowly towards information technology due to its positive impact shown on behalf of the business. Operation without usage of computer and other similar technological devices, in today's world could be unthinkable for business function for every kind of business was it small business and corporation, either. Facilitation for proper operation business flow is proved to be management information business MIS.

As a system, MIS provides mitigation on business operation. Its major role in nowadays' has become a valuable tool in decision making. Use of computers and other devices makes functional divisions and departments within the company impacting on organizational development and growth. MIS eases company to create competition advantage and let the business taking leaps straight goal achievements.

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