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The Role of Management Information System in Islamic Countries and Malaysia

[1]Ali Saleh Ahmad Mohammed, [2]Siti Rugayah Hj Tibek, [3]Dr. Ideris Endot

Institute of West Asian Studies (IKRAB) University Kebangsaan, Malaysia.

ABSTRACT

Every aspect of management in the modern age relies heavily on information to thrive. Nothing moves without information and it is generally believed that information is power and accuracy. Nowadays management without information system is obsolete and inefficient. A management information system (MIS) is a system that provides information needed to manage organizations effectively. 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 This paper aims to identify the importance of MIS and its main role in economic development of Islamic countries and the benefit of using the concept of MIS and its applications by the governments of these countries to support their internal management activities and decision making. The study will conduct a brief overview on the evolution of MIS and its main definitions and activates its main role for organizations, and then trying to identify the main obstacles that prevent from using MIS widely in Islamic countries.

Key words: MIS, Organization, Baking Sector, Information Technology, Applications, Financial Institutes.

Introduction

A management information system (MIS) is a system that provides information needed to manage organizations effectively. Management information systems involve three primary resources: technology, information, and people. It's important to recognize that while all three resources are key components when studying management information systems, the most important resource is people. 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 used by management accountants to solve business problems such as costing a product, service or a business-wide strategy (Terence Lucey, 2004: 34).

Initially in businesses and other organizations, internal reporting was made manually and only periodically, as a by-product of the accounting system and with some additional statistic(s), and gave limited and delayed information on management performance. Previously, data had to be separated individually by the people as per the requirement and necessity of the organization. Later, data was distinguished from information, and so instead of the collection of mass of data, important and to the point data that is needed by the organization was stored.

Changing circumstances and environments have necessitated the need for the proper dissemination of the studies on MIS and the evolution was conducted since 1960s and the concept applied nowadays in all modern and developed countries in Europe and United States. Applying the concepts of MIS still in the primary stages in many of the Islamic countries and Arab countries as well (Effy Oz, 2008: 112).

The development and use of information management systems (MIS) is a modern phenomenon concerned with the use of appropriate information that will lead to better planning, better decision making and better results.

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A management information system is generally thought of as an integrated, user-machine system providing information to support operations, management and decision-making functions in an organization. As a matter of fact, an MIS is a special-purpose system useful for management in an organization. MIS is an accessible and

Corresponding Author: Ali Saleh Ahmad Mohammad, Institute of West Asian Studies (IKRAB) University, Kebangsaan, Malaysia.
E-mail: salehali64@yahoo.com

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rapid conveyor belt for appropriate high quality information from its generation to its users. The heart of an effective MIS, therefore, is a carefully conceived, designed and executed database. Its level corresponds to adaptive decisions (Nigel Piercy, 1987: 45).

The characteristics of MIS in practice include:

- An information focus, designed for managers in an organization.
- Structured information flow.
- An integration of data processing jobs by business function, such as. production of MIS,personnel MIS and so on and
- Inquiry and report generation, usually with a database.

Literature Review:

The concept of information in an organizational sense is more complex and difficult than the frequent use of this common word would suggest. Every society, no doubt, is an information society and every organization is an information organization. Therefore, information is a basic resource like materials, money and personnel. Information can be considered either as an abstract concept (ideas) or as a commodity, usually in the form of letters and reports (Mohammad Dadashzadeh, 2002: 45).

Essentially, therefore, information has become a critical resource, just like energy, both of which are vital to the wellbeing of individuals and organizations in the modern world. Like energy and politics, technology is changing the ways in which information is captured, processed, stored, disseminated and used. Information, therefore, like any other resource in an organization, should be properly managed to ensure its cost-effective use. It is an ingredient that is vital to good management and if properly managed, should rank in importance with the organization's personnel, material and financial resources. In an organizational context, it is increasingly being recognized as a resource independent of the technology used in manipulating it.

The implication of this realization is the further recognition that information is the cohesive element that holds an organization together. Information is an unusual commodity, quite unlike most physical goods or consumer durables. Since it is intangible, it is often hard to enforce custody. For this simple reason, it is often crucial to highlight the significant differences between this resource and others when developing a management framework. Its content can be distinguished either by source (internal or external) or by form (numeric or non-numeric). Non- numeric can either be structured or unstructured. Internal information is that generated within an organization and generally is of interest and value only to decision makers within that organization. External information can be regarded as that created by others, that is, outside the four walls of the organization, generally by publishers in the form of books or journals, or by Governments, external contacts and the like. Information professionals have a surprising range of ideas on what information is. They have not been able to produce a widely acceptable definition (Argyris, C., 2001:101).

However, he is not without his bias for management information system (MIS) managers. He feels they are the right professionals to play the role of information managers in the organization, as he concludes that either the MIS manager will take the initiative to lead this merger of the firm's data resources activities and make some sense of their management, or a manager outside of the MIS organization will do it for him. It is in the context of this coalescence that the employment of the term "information management" can best be understood as a method of describing the activity or work role created by any such coalescence in an organization. Management information is information produced for decision making. It can either be structured or unstructured.

Information management has been defined as the organization-wide capability of creating, maintaining, retrieving and making immediately available the right information, in the right place, at the right time, in hands of the right people, at the lowest cost, in the best media, for use in decision making (Langemo, 1980). In the same vein, Best (1988) defines information management as the economic, efficient and effective co-ordination of the production, control, storage and retrieval and dissemination of information from external and internal sources, in order to improve the performance of the organization. This definition is narrow in perspective in that it does not take care of managing the characteristics of information itself (content, ownership, representation and equality), irrespective of the storage medium, equipment that processes it and the system that employs it. In summary, therefore, the key issue involved in information management is managing information in an organization using modern information technologies.

One approach by which organizations can utilize computing capability is through the development of MIS. There is no universally accepted definition of MIS and those that exist reflect the emphasis and perhaps prejudices of their authors. However, the term "management information system" can be seen as a database management system tailored to the needs of managers or decision makers in an organization. MIS is a system using formalized procedures to provide management at all levels in all functions with appropriate information based on data from both internal and external sources, to enable them to make timely and effective decisions for planning, directing and controlling the activities for which they are responsible (Argyris, 1991: 111).

It will be noted from the above definition that the emphasis is on the uses to which the information is put. Planning, directing and controlling are the essential ingredients for   management".

In essence, the processing of data into information and communicating the resulting information to the user is the key function of MIS. It should, therefore, be noted that MIS exist in organizations in order to help them achieve objectives, to plan and control their processes and operations, to help deal with uncertainty, and to help in adapting to change or, indeed, initiating change. The question one may then ask is: What are the management functions that MIS facilitates and what are the various decision levels at which management information can be put into use? It is through a thorough answer to this question that the importance of MIS in management can be realized. However, before we can examine management functions, it is essential we discuss organization processes and structures.

The Role of Management Information System in Islamic Countries:

Management Information Systems (MIS) provide regular information to managers to allow them to make decisions based on data rather than guesses. Certain data and analysis can play a very useful role in making good decisions about where and when to use human and other resources to achieve the mission of an organization. Managers with quality MIS are able to make decisions from an informed stance rather than a haphazard one. MIS can answer questions such as: Would it be better to add staff at the beginning or end of a manufacturing process? How do we choose the most efficient way to use our space? Do we need more patient exam rooms or a bigger lab? How much inventory should I store and when do I order more stock? What hours have the most customers, so I'll have an adequate staff to serve them?

The world is developing an increasingly global market and economy and the Islamic countries also developing and trying to follow the latest technologies to manage the business activities and government service in best way with high accuracy and safety. Nowadays the managers in Islamic countries start to realize that one tool they need is regular, clear and consistent information to help them in guiding their organizations. This does not happen by chance. A system needs to be thoughtfully created with the purpose of providing useful information in the simplest and most elegant way possible. The basic management information system measures inputs and/or outputs, allowing managers to analyze the relationship between them and make decisions based on the outcomes they desire (Clarke, S., 2007: 201).

MIS Types in Islamic Countries:

It should be recognized that not all types of Management information systems can be applied in Islamic countries because the entire business environment in Islamic countries is somehow different from other countries in Europe and United States for example. Below are the main types applies in most of the Islamic countries.

Financial MIS:

Financial MIS creates reports about a company past and present money activities. The Financial MIS can show a company's profit and losses, financial records about a company that states how the company is doing, decisions on spending and how a company can control cost.

The financial MIS in most of times applied in Islamic banks that use the Islamic financial systems. However we found most of the Islamic financial institutes use financial MIS to manage all their banking activities and services (Alfred M. Jaeger and Rabindra Nath Kanungo, 1999: 134).

Marketing MIS:

Marketing MIS handles product creations, sales, prices, advertisements and future business decisions. Marketing MIS makes decisions on product and service appearance. Marketing MIS manages customer contacts, makes questionnaires for customer feedback about their company product or service and tracks customer spending habits.

Human Resource MIS:

Human Resource MIS manages employees and selection of employees. Human resource MIS looks at needs of the employees, the workforce rules, the hiring process, training, and job assignments. The company's Human resource MIS is in charge of payroll and medical care for its employees.

The Main Benefits of Applying MIS in Islamic Countries:

Applying the management information systems to manage the daily activities of Islamic organizations and government institutes has brought huge advantages to the economy of Islamic countries and developed many governments' service sectors. One of these sectors is the Islamic financial system and Islamic banks that require new and modern management systems utilizing the latest technologies to ensure security and accuracy as well as professional performance (Daniel, E., 2004: 69).

Below is the summary of the main benefits resulting from applying MIS in Islamic countries institutes:

1. Better Planning and Control:

Management information systems have changed the dynamics of running businesses efficiently. Decentralization is one of the biggest advantages; it allows monitoring of operations at low levels and frees up resources for departmental managers to devote time to strategic activities. Coordination of specialized projects and activities is much better and decision makers in the organization are aware of issues and problems in all departments. Another advantage of MIS is that it minimizes information overload, which can be quite common with conventional businesses in the modern era.

2. Support Decision Making:

MIS has to be designed and managed in such way that it aggregates information, monitors the company's activities and operations and enhances communication and collaboration among employees. This ensures better planning for all activities and better ways to measure performance, manage resources and facilitate compliance with industry and government regulations. Control helps in forecasting, preparing accurate budgets and providing the tools and vital information to employees, top management and business partners.

3. Tracking Resources:

Management information system helps Islamic organizations keep track of its resources and stay organized. MIS allows the managers working in Islamic countries to make different types of reports about organization activities. Managers can print a report that show the daily activities, how products or sold or services being used and use reports to make future business decisions.

4. Cost Efficiency:

Most of private organizations in Islamic countries are considered as small business. However keeping costs down throughout a small organization can create a valuable competitive advantage over the company's peers and established rivals. MIS systems can assist small business organizations in Islamic countries in streamlining production processes and increasing supply chain efficiency by reporting on aspects of production and distribution systems, including lead times, defect rates and non-value adding activities.

5. Employee Productivity:

Employees in small businesses must often take on a wide range of tasks, filling several vital roles at once. Freeing up employees to focus on the most productive and strategic tasks can be highly beneficial in small businesses. Management Information Systems handle the time-consuming task of collecting and formatting large volumes of information automatically.

MIS in Malaysian Organizations:

Malaysia is an emerging Asian economy aspiring to move towards a technology-driven and high-tech production-based pattern of development and thus replicate the experience of the newly industrializing economies of Asia. In fact, Malaysia has been categorized in the group of countries that have the potential to create new technologies on their own. The prospects remain promising despite the 1997 Asian financial crisis, although no country in the region was spared.

The development of MIS in Malaysia has eventually contributed to a new level of needed management information in this country. The increasing interest among Malaysian organizations and government in MIS had led to much activity in developing techniques and software for data management that helped Malaysian organizations and government institutes to achieve fast development in the field of management and obtaining

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well-organized institutes especially in the financial sectors where security and accuracy is highly demanded. However, it should be noted that the new movement in MIS in Malaysia in most of the cases is subjected on the uses to which the information is put and not how it is processed. The emphasis is on managing the information as a resource, which is important, and not on the intermediate processing stage. The managements in Malaysian business environment are faced with an accelerating rate of change and an ever more complex environment. The vast development in management approaches and the implementation of new technologies that help managers to do automated management activities encouraged the Malaysian government to use the latest applications of MIS in its major ministries and departments. In addition to that the high level of improvement of Malaysian institutes and private organization increase the demand to latest MIS applications and nowadays MIS is applied in most big and medium organizations in Malaysia (Alexander von Pock, 2007: 234).

In Malaysia the banking sector has acquired great advantages from applying MIS and provides better services for bankers and investors. Malaysia has several development financial institutions (DFIs) that were set up with specific objectives to develop and promote strategic economic sectors, including the manufacturing, agriculture, infrastructure and maritime sectors, small and medium enterprises (SMEs), as well as sectors that are export oriented. In addition to that Malaysia has emerged at the forefront in the development of Islamic finance and has a comprehensive and vibrant Islamic financial system which includes Islamic Banking, Islamic Capital Market, Takaful and Retakaful, and Islamic Interbank Money Market. Presently, Malaysia's Islamic banking assets reach RM281.7 billion (USD82.9 billion at exchange rate of 3.4) with an average growth rate 18-20% annually. However the government of Malaysia through Bank Negara Malaysia (the Bank), the Central Bank of Malaysia, and other large banks in Malaysia recognized the importance of MIS to achieve their ultimate goals which is mainly ensuring high security and accuracy as well as provide better feedback and information for decision makers inside these banks.

Financial sector reforms were initiated as part of overall economic reforms in the country and wide ranging reforms covering industry, trade, taxation, external sector, banking and financial markets have been carried out since mid 1990s.

Modern Banking Systems in Malaysia is dedicated to providing the financial institution with the finest on-line total banking system available today. The unique position as one of the leading single vendor providers has eliminated finger pointing problems between hardware and software organizations. All these features added high value to the banking services in Malaysia by applying the right MIS applications to reflect the real image of Malaysian financial institutes. Moreover the MIS superior software, flexibility, ease of operations, quick access to critical management information, reliability and cost effectiveness, and all these features helped Malaysian financial institutes to be in equal position regarding management level comparing to other developed countries in UK and Europe (O'Brien, J., 2002: 41).

In addition to the financial and government institutes, MIS have been seen widely implemented among many Malaysian educational institutes and universities. The Education Development Plan for Malaysia (2001-2010),henceforth referred to as the Blueprint, takes into account the goals and aspirations of the National Vision Policy to build a resilient nation, encourage the creation of a just society, maintain sustainable economic growth, develop global competitiveness, build a knowledge-based economy (K-economy), strengthen human resource development, and maintain sustainable environment development. All these goals won't be achieved without right management systems that utilize the latest applications of information technology that apply management approaches in the right way (Yasuhiko Takahara, Yongmei Liu, 2006: 199).

There are some evidences from numerous surveys conducted in Malaysia, that existing MIS, often using advanced computer equipment, have had relatively little success in providing management with the information it needs.

Reasons discovered include the following:
- Lack of management involvement with the design of the MIS.
- Narrow or inappropriate emphasis of the computer system.
- Undue concentration on low-level data processing applications particularly in the accounting area.
- Poor appreciation by information specialists of management's true information requirements and of organizational problems, and
- Lack of top management support.

Conclusion:

In this paper, attempts have been made to examine the MIS among Islamic countries in general and Malaysia in particular. MIS is the lifeblood of any organization and Islamic countries should realize the importance of MIS. Both public and private sectors must be committed to seeking formal or organized information before taking decisions. Management problems will be provided with specific answers through computer simulations and gaming techniques. Managers in Islamic countries must be careful, as they can

become busy 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 MIS unit is put in place.

To be successful, an MIS must be designed and operated with due regard to organizational and behavioural principles that match with the business environment in Islamic countries as well as technical factors. Management must be informed enough to make an effective contribution to system design, and information specialists (including systems analysts, accountants and operations researchers) must become more aware of managerial functions and needs so that, jointly, more effective MIS are developed.

It is highly recommended that most Islamic countries replicate and study the successful adoption of MIS in Malaysia in order to improve its entire business environment and management systems and to make huge required transfer from the traditional management approaches to modern management systems.

References

Alexander von Pock, 2007. Strategic Management in Islamic Finance.

Alfred, M. Jaeger, Rabindra Nath Kanungo, 1999. Management in developing countries.

Argyris, C., 2001. "Management information systems: the challenge to rationality and emotionality", Management Science.

Clarke, S., 2007. Information Systems Strategic Management - An Integrated Approach (Second ed.) New York: Routledge (Taylor & Francis Group).

Daniel, E., 2004. " Forecast: special librarian to information manager", Special Libraries, 73(2).

Effy Oz, 2008. Management Information Systems.

Mohammad Dadashzadeh, 2002. Information technology management in developing countries.

Nigel Piercy, 1987. Management information systems: the technology challenge.

O'Brien, J., 2002. Management Information Systems - Managing Information Technology in the Internetworked Enterprise. Boston: Irwin McGraw-Hill.

Terence Lucey, 2004. Management information systems.

Yasuhiko Takahara, Yongmei Liu, 2006. Foundations and applications of MIS: a model theory approach.