Studies on MIS in Hospitals

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Abstract

The purpose of this study is initially exploratory since the researcher will conduct exploratory research to gain a deeper understanding, to answer the research questions. The study is also descriptive as data is collected and analyzed. Finally, the researcher will explain while answering research questions, so the study will also be explanatory.

- Review of the literature has been carried out in order to understand the relationship between MIS and hospitals' performance from the point of view of an end user perspective.
- Study of different methods to find an appropriate model for analyzing the impact of MIS on hospitals' performance.
- Model test and modification based on the context characteristics.
- Field work done by gathering financial and economic data and distributing the questionnaire.
- Data analysis and data interpretation.

In summary, the process of Management Information System is an ongoing quality management measure that, when used effectively, monitors the quality of hospital systems. On the basis of review of literature, the research gap was found that none of the study was conducted to know the effectiveness of currently management information systems in hospital practices. It is not clear that research findings regarding need and role of management information systems in healthcare organization. Therefore, the study was needed to know the need and role of a good management information system and finally to frame a standard performance of the hospitals.

INTRODUCTION

Management Information System (MIS) is an integrated, user machine system for providing information to support operations, management, and decision making functions in an organization. The system utilizes computer hardware and software; manual procedures; models for analysis, planning, control and decision making; and a database. MIS, in fact, is a supportive system and runs parallel to the physical system of an organization and provides it support at every step for carrying out the activities and the functions, which receives and analyses the signals systematically, in order to direct and control the activities for smooth and efficient running of the organization with the resources deployed for this purpose.

The study of the available literature in these areas provided the conceptual base both for defining and analyzing the existing system and in the design of the proposed model of MIS. For rational decision making of a manner management information is an essential resource which is provided by MIS of the organization. It has also been established beyond doubt that in today's complexities of business and management, no organization can afford to survive and grow without an effective MIS.

An MIS, to be effective, should provide the management with the right information at the right time and in the right manner. Management Information System provided by the MIS of the organization is to be evaluated in order to gauge the effectiveness of MIS in an organization. As different authors have given different attributes of management information. It becomes very difficult to identify the important attributes of management information to evaluate its effectiveness. Thus, a need was felt to develop a model on the basis of which organizations in general and the board in particular might evaluate the effectiveness of their MIS in order to evaluate the effectiveness of their MIS in order to control and better manage the MIS of the organization. The study of the available literature in these areas provided the conceptual base both for defining and analyzing the existing system and in the design of the proposed models of MIS.

REVIEW OF LITERATURE

- Grigporous & Zopounidis (2012) found in his research that the long-term survival of any business organization depends on its ability to assess the outcome of their employees and to examine employee contribution in achieving the set goals. In this context, the employee evaluation will provide a quantitative measure to determine the degree on conformance between the employee performance and the defined standards.

- Michell, B., Douglas, H., and John, B., (2010) explained that employees with low quality PA experiences (relative to those with mixed and high quality PA experiences) were more likely to be dissatisfied with their job, be less committed to the organization and more likely to be contemplating leaving the organization. Jawahar, I.M. (2010) explained performance Management Information System feedback as a means for influencing the performance.

- Eric van der G., Harrie F.J.M., van t., and christal, G.R.,(2009) explained the role of performance Management Information System in healthcare as to measure and control the quality and efficiency of care providing teams.

- Bartram , *et al.* (2007) found some evidence in their study that in healthcare organizations, managers or administrators are having different perceptions towards the strategic HRM. In results, there is a limited focus on collection and linking of human resources performance data with organizational performance management process. A survey of three years of Management Information System experience of Scottish general practitioners found that 47% of respondents had altered their educational activity, 33% had undertaken additional education as a result of the Management Information System and 13% felt it had impacted their career development. However, by third year only 41% reported Management Information System was valuable or extremely valuable, down from 47% in the first year. The authors concluded that there is a clear requirement to ensure Management Information System becomes relevant for all participants (Colthart *et al.* 2008)

- Albadvi and Keramati (2006) also provided the satisfactory evidences to show that MIS implementation increased the performance when supported by the rationale complementary investment.

In the face of extreme competition and economic pressure, firms are changing their fundamental unit of analysis from the business function to the business process. MIS investments may make little direct impact on the overall performance of the firms or the economy until they are combined with complementary investments in business activities, human capital and companies' redesigning. The increase in the use of information systems has led to several changes in the workflow of both the private and public sector for achieving strategic advantages and gaining financial and business benefits far outweighs its public counterparts.

However, in the beginning of nineties, the conservative approach of public sector in using Information Systems began to change. The traditional Information

System was being replaced by modern systems with improved and sophisticated software and hardware applications. Furthermore, with the advent of communication technologies such as the internet, intranet and extranet, the public sector environment has resulted in better collaboration among the intra and inter agencies. Apparently, the above developments have forced the government to re-evaluate and reassess their system's effectiveness.

- (Dedrick *et al.*, 2003) For many years there has been much discussion about whether the MIS revolution was paying off in higher productivity. Studies in the 1980s found no positive relationship between MIS investment and productivity, a situation referred to as the productivity paradox. Since then, decades of studies at the firm and country level have consistently shown that the impact of MIS investment on productivity and economic growth is significant and positive.

- Hammer (2001); Straub and Watson (2001) Computer-based information system is one of the resources for increasing the economic growth and customer satisfaction. It has a potential to cause an impact on the structure of organization and improve the quality of organizational performance significantly. In the network era, electronic linkages within and among organizations are proliferating and are altering the ways in which firms acquire factor inputs, convert them into products and services and distribute the result to their customers. This raises new questions about how information technology can be applied for improving organizational performance.

- Delone & Mc Lean (1992) conducted a study which resulted in a proposed model of IS success. Ever since, this study has been considered very significant in contribution towards a universal model for looking at Information System's performance. Several attempts have also been made to validate their proposal model (Seddon & Kiew, 1994 and Rai *et al.*, 2001). The model comprised six dimensions, namely, system's use, system's quality, user's satisfaction, information quality, individual impact and organizational impact.

- Vesey and Conger (1995) in their paper on Requirements Specification: Learning Object, Process and Data Methodologies' viewed specifying information requirements i.e. determining and documenting the requirements for an information system, is arguably the key to developing successful information systems (IS). Not getting the correct final system requirements initially is largely responsible for the cost and schedule overruns that are

still fairly prevalent in IS development. Specifying information requirements is not only the most important step in developing IS, it is probably also the most difficult.

- This research investigated the effect of three methodologies (process, data and object oriented) on novice analysts' performance in learning to specify information requirements. The result demonstrates that of the three methodologies investigated, novice analysts were better able to apply the process methodology and least able to apply the object methodology.

- There were two possible reasons for the significantly better performance of process over data and object methods. Process methods may be better defined and were developed earlier than both data and object methods.

- Newman and sabhetwal (1996) in a search paper 'Determinants of Commitment to Information Systems Development : A Longitudinal Investigation' mentioned that commitment to an information System(IS) development project is widely believed to affect the eventual success of the system. Problems arising from low commitment had also been described. This paper provides some initial insights into the determinants of commitment based on a longitudinal study of an IS project that was stopped and then restarted on several occasions over a year period(1975-1992).

METHODOLGY

The study has been undertaken with a view to suggest a systematically designed Model of MIS to help PPHs (Public and Private Hospitals) to manage the system of working of various departments of the sample hospitals so as to access their actual information and developing a framework for design, development, implementation and other related aspects of a suitable Management Information System.

The study makes contribution to both theory and practice. Also, it has been conducted in two phases. In the first phase, the research problem has been confined to explore and describe the impact of MIS investment on the hospitals' performance. A model has been used to assess the impact of MIS on the performance of hospitals. Performance factors have been evaluated in the second phase of the research. Several meetings with experts assisted us to prepare and localize the questionnaire. So, the practical information has been extracted through questionnaire data collection from the hospitals.

The purpose of this method of data collection was to gain an understanding of what is presently being done in the hospital system and how the institution under study is structured and its functioning. To begin with, various books, journals, case studies and other relevant material were referred by visiting the libraries of some of the universities. Consultations were made with the faculty members, having specialization in the area of management information system, of this institution with a view to chalk out an approach for the study. The initial literature survey and discussion with the academicians, to a larger extent, helped the researcher in broadly identifying the characteristics to be incorporated in the design of MIS, structure and framework of MIS, tools, techniques and methodologies for analysis and design of MIS.

FINDINGS OF RESEARCH STUDY

From this review, we conclude that the Indian hospitals are run on conventional approach and effective and efficient management is seemingly non-existence in our hospitals. The cases of delay, low employee morale, lack of accountability and team spirit and inefficiency galore in our hospitals. There are many problems faced at almost every stage by the patients thereby affecting the ultimate objective of better patient care. The information is handled haphazardly and the information is not according to a well thought-out plan to provide efficient patient service.

The reasons considered to be reasonable for the inadequacy of the present information system especially in public hospitals are the following :

1. The absence of realization of the importance of effective information system in a hospital's environment. The private and voluntary hospitals, being more conscious of modern tools and techniques such as computers for hospital management, have better appreciation of the HIS than the public hospitals and are, therefore, better placed.

2. Since the services are provided free of cost, there is overburdening of the facility and hence the existing system crashes due to excessive strain.

3. Lack of understanding about how computers can help in efficient performance of various routine functions apart from providing information for effective decision-making.

4. Lack of funds in public hospitals.

5. Lack of accountability

6.   Resistance from the employees.

7.   Absence of professional management culture in the hospitals.

8.   Lack of commitment on the part of top management towards the development of computerized information system.

9.   Non-availability of economically viable Computerized Hospital Information System.

In addition to the above problems being faced by the hospitals in the context of information systems, there are certain additional factors that will increase information management problems in near future. These are on account of significant changes in the living standards, literacy rate of the Indian.

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