ABSTRACT

Decisions in today’s competitive and turbulent environments without access to information can confuse managers. The information system, which is planning, design and deployment as efficient and effective way, can help to improve the organization and create competitive advantages. One of the success factors and effectiveness of information systems in organizations is the organizational factors. In this research, organizational factors such as top management support, resource allocation, decision-making structure, management style and alignment of goals and knowledge of IT management, that affects the success factors of information systems (System quality, user satisfaction, perceived usefulness and quality of information), were analyzed and prioritized by Analytic Hierarchy Process (AHP) in Industries and Mines Organization of Isfahan Province. After gathering information and analysis them by using the Expert Choice, it was found that among success factors of information systems, and user satisfaction is the most important factor and the most important factor affecting success of organizational information system is the top management support.

Keywords: Analytic Hierarchy Process (AHP), Industries and Mines Organization, Information Systems, Organizational Factors, Top Management Support

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1. INTRODUCTION

In today’s world, Information and resources not only known as one of the main assets of any organizations, but they are considered as tools for effective management of other resources and assets of organizations such as financial resources, human resources, etc. Today, Organizations use information systems to achieve strategic advantage, financial and business benefits.

Despite lagging behind its private counterpart, there have been signs indicating that the public sector’s conservative approach to using information systems has begun to change. The traditional information systems are gradually being replaced by modern systems with more sophisticated software and hardware applications. Furthermore, the advent of communication technologies such as the Internet in the environment have resulted in better inter and intra agency collaboration in the public sector. These developments have apparently forced governments to re-evaluate and re-assess their information systems effectiveness. For over two decades, information systems (IS) success was the primary focus in IS literature (Vanlommel & De Brabander, 1975).

One of the highly significant contributions to the literature was the study done by DeLone and McLean (1992) which resulted in a proposed information systems success model. This model had since become instrumental towards contributing to a universal model, which many employed when looking at information systems performance. Further attempts have been made to produce enhanced models (Rai et al., 2002). In validating their proposed IS success model, Rai et al. (2002) made use of six dimensions namely system use, system quality, user satisfaction, information quality, individual impact, and organizational impact. The model had since been updated in 2003 to allow application in the e-commerce context.

In reviewing the success of information systems, many studies have been performed. Some of these studies sought to identify the criteria influencing the success of information systems and some of them followed the evaluation of information systems. Some initial studies showed that organizational factors are the most important issues that should be considered during implementing of computer based information systems.

In this research analyzing and prioritizing organizational factors affecting the success of information systems have been studied. Analytic Hierarchy Process (AHP) in Industries and Mines Organization of Isfahan Province has been applied.

2. LITERATURE REVIEW

The impact of the organizational dimension on IS success has continued to be researched using multiple perspectives. Some of the researches have used different terminologies including contexts, variables, and factors when referring to organizational dimension. Lu & Wang (1997) for example, used management style as a measure of organizational context. Saunders & Jones (1992) identified organizational variables as: Mission, size, goals, top management support, IS executive hierarchical placement, maturity of IS function, size of IS function, management philosophies/style, evaluator perspective, culture, and IS budget size. In addition, Ang et al. (2001) identified organizational factors that influence IT usage as organizational structure, organizational size, managerial IT knowledge, top management support, financial resources, goal alignment and budgeting method.

Based on a comprehensive list of organizational factors from related studies (Grover, 1993; and Ang et al., 2001), six organizational factors that influence are successes were identified to be used in this study. The six factors are: Decision-making structure, top management support, goal alignment, managerial IT knowledge, management style, and resources allocation that are presented in Figure 1.
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