Chapter 63

ICT Supplier Evaluation Criteria in Large University Hospitals: An Empirical Examination in Turkey

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ABSTRACT

Supplier evaluation of Information and Communication Technologies (ICTs) in healthcare institutions is a crucial problem, and the success of the healthcare system is significantly affected by this decision. In this chapter, several criteria, such as physical characteristics, cost, efficiency, speed, security, productivity, providing advanced technology, technical service and warranty, capable personnel, and in-service training, have been examined in the context of healthcare ICT supplier evaluation. These criteria are evaluated by both medical and administrative executives (N = 48) in 26 university hospitals operating in various provinces in Turkey. Findings show that medical and administrative executives and female and male executives in hospitals differ in terms of their evaluation of ICT suppliers. Overall, this study proposes to contribute to the relevant literature and practice, and reflects the perspective of a developing country, Turkey.

INTRODUCTION

It is of great importance for health-care institutions to pay attention to their core competencies in order to sustain their competitive power in the long-term. Information and managing the information are among the most necessary core competencies of health-care institutions or any type of businesses, particularly because of the recent advances in the information and communication technologies (ICTs) (Barca, 2002; Iraz, 2005; Rivard and Aubert, 2007).

In health-care institutions, it is very difficult and costly to hire and retain professional people...
involved in the technical side of the ICTs, such as system development and implementation, and maintaining the system. That is why there is an increasing demand for the companies that are supplying and/or outsourcing the ICTs and ICT-related services, as they have specialized personnel, knowledge, and capabilities as well as an innovation culture. Therefore, it is of critical importance for health-care institutions to evaluate the suppliers of the ICTs (Yigit et al., 2004).

In this chapter, several factors that are critical and most crucial in the ICT supplier evaluation have been examined in the context of health-care institutions. These factors include physical characteristics, cost, efficiency, speed, security, productivity, providing advanced technology, technical service and warranty, capable personnel, and in-service training.

The factors mentioned above have been evaluated by both administrative and medical executives of the large university hospitals (700 and over beds) in Turkey. They were required to respond and rate with respect to which factors are most important in their ICT supplier evaluation. For this purpose, 14 medical managers and 34 administrative managers in 26 university hospitals have been surveyed during Fall 2010 in Turkey.

The remainder of this chapter is organized as follows. Next section provides a review of the literature with respect to the criteria considered for ICT supplier evaluation not only in general context but also in health-care context. The third section details the empirical study conducted in the context of this chapter. This section includes information about the overview of the health-care system in Turkey, survey and data collection procedures. Results are discussed in the fourth section. The fifth section enumerates the solutions and suggestions regarding the issues under discussion. Finally, the chapter ends with the suggestions for future research and concluding remarks of the chapter.

**BACKGROUND**

There are considerable number of studies that focus on the factors and/or criteria that are considered in the process of ICT supplier evaluation. Some of these studies are done in general context while others focus on the specific context of health-care. In this section, we will first mention the studies conducted in general context and will provide them in chronological order. We will then articulate the relevant literature in health-care context. Appendix A summarizes the studies and the criteria examined for ICT supplier evaluation.

**General Context**

Chau (1995) identifies two vendor related factors (technical and non-technical) in the selection of packaged software by small business owners and managers. Technical factors include technical support, user training, technical skills, and experience of using products developed by the vendor. Non-technical factors include reputation, business skills, references, and past business experience with the vendor. Technical support is ranked first by both owners and managers in their packaged software selection.

Wei, Chien, and Wang (2005) describe three vendor related criteria, such as reputation, technical capability, and service, in selecting the software vendor. They also note that there are software related criteria, such as total costs, implementation time, functionality, user friendliness, flexibility, and reliability, which are also essential in software and vendor selection decision.

According to a survey conducted with the participation of a group of logistics executives, Gustin, Daugherty, and Ellinger (1997) find that product/service related attributes (flexibility, ease of use, integration with existing applications, integration with existing database, efficiency, and ease of installation), vendor related attributes...