

# Organizational Factors Affecting IS Outsourcing Success in Taiwanese Hospitals



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## INTRODUCTION

Hospitals have often considered information systems (IS) outsourcing as a way to build sustainable competitive advantage, mitigate business risks, and free up resources for core business operations. Hospitals undertake IS outsourcing to, for example, save costs, concentrate on other activities or core activities, improve services and productivity, and contract out the maintenance of existing systems (Bhakoo et al., 2012; Hsiao et al., 2009; Karimi et al., 2012; Lin et al., 2007a; Mayson & Fleschner, 2009; Menachemi et al., 2007; Tit, 2009). This is because the setup of an IS service is usually an expensive exercise and is not something that a single organization or hospital can do it alone. Moreover, it is claimed that IS outsourcing contractors can achieve economies of scale and specialization because their only business is information processing. For instance, IS outsourcing contractors can purchase equipment more cheaply, and allocate fixed cost more favorably. The potential for cost savings has led many organizations to enter into various types of contracts with IS outsourcing contractors. Furthermore, IS outsourcing contractors have usually possessed more technical know-hows and skilled personnel to solve their clients' problems than an independent organization (Lin et al., 2007b; Liu et al., 2008; Low & Chen, 2012; Moschuris & Kondylis, 2006; Roberts, 2001). This can be translated into substantial cost savings for outsourcing hospitals (Diana, 2009; Hsiao et al., 2009).

However, IS outsourcing process is an inherently uncertain and complex organizational task because it must deal with not only technological and social issues but also organizational aspects (e.g. information processing) that, by and large, are usually outside of the project team's control (Lin et al., 2008a). For example, strong top management support can help organizations in establishing vertical IS instead of processing information through the existing hierarchical channels and this will improve the information processing capacity of organization and, in turn, is likely to lead to IS outsourcing success (Ramezan, 2011; Standing et al., 2006). Moreover, IS expertise within the organization can have a significant impact on IS outsourcing success. IS expertise can be described as the extent to which an organization has diffused key IS into its base foundation for supporting business applications, including platform technologies such as hardware and operating systems, network and telecommunications technologies, and databases, and a variety of shared services (Armstrong & Sambamurthy, 1999; Lin et al., 2007c). The level of organizational IS expertise forms a cornerstone for increasing organizational capabilities and is often suggested as a tool to improve IS outsourcing success (Fairbank et al., 2006; Liu et al., 2012).

Although a plethora of IS outsourcing studies have been published in the past literature, IS outsourcing in the hospital setting, however, is still under-studied. Not many studies have examined how the hospital executives manage organizational factors in making

IS outsourcing a success (Diana, 2009; Lorence & Spink, 2004), particularly in Taiwanese hospitals. This may be due to the fact that only 20% of hospitals and healthcare organizations' budgets are spent on outsourcing compared with 33% for other industries such as manufacturing, banking, insurance, and finance (Shinkman, 2000). As a result, hospitals and healthcare organizations tend to have less experience in managing external relationships such as IS outsourcing (Shinkman, 2000) and it is not unusual for hospitals and other healthcare organizations to make mistakes in developing and managing their IS outsourcing decision-making process (Guy & Hill, 2007; Huang et al., 2005; Huang et al., 2009; Lin & Huang, 2013). Understanding key organizational factors affecting IS outsourcing success will help hospital executives to better manage and select appropriate outsourcing arrangements. Hence, a survey was conducted to examine some of the main organizational factors affecting IS outsourcing success in Taiwanese hospitals. The main objective of this book article is to examine the relationships between the three organizational factors (i.e. top management support, perceived time pressure, and IS expertise) and IS outsourcing success. A key contribution of this book article is the development of an IS outsourcing success relationship framework for Taiwanese hospitals. The results will guide hospital executives to develop their own approaches to manage IS outsourcing process in Taiwanese hospitals.

## BACKGROUND

IS outsourcing tends to generate strong emotions among the senior executives and external contractors (Lin et al., 2007b). There are many reasons and issues contributing to the growth of IS outsourcing. A review of relevant outsourcing literature has revealed that there are several important factors that govern successful and less successful IS outsourcing and they can be roughly grouped into three main categories: (1) top management support – strategic direction and vision; (2) perceived time pressure – deadlines and the degree of uncertainty about future business needs; and (3) IS expertise – employee education and training, and in-house capability. Top management support is critical in managing the strategic direction and vision

of IS outsourcing and this requires a high degree of managerial attention (DiRomualdo and Gurbaxani, 1998; Love et al., 2005). Top management is also crucial for allocating adequate financial and other resources for undertaking IS outsourcing (Lee and Kim, 2007; Snyder-Halpern, 2001). IS may be strategic in underpinning an organization's core business and achievement of goals, and critical to its present and future strategic direction, or only useful. If IS is not vital to an organization's business, then it is likely to be outsourced.

Degree of uncertainty about future business needs can add to the perceived time pressure faced by IS outsourcing. Perceived time pressure also arises when the organization has only a limited amount of time available to finish a particular IS outsourcing projects. The other key factor that may influence IS outsourcing success is IS expertise. IS expertise is related to the employees' understanding of advanced technology and methodology in IS, IS education and training, and in-house capability. It is often appropriate for an organization to outsource in a situation of low IS expertise. This exists where a technology is new and unstable, and/or where there is an existing technology but being applied in a radically new way, and/or where there is little relevant in-house experience and knowledge with the technology.

## RESEARCH HYPOTHESES

The socio-technical systems (STS) and information processing (IP) perspectives were drawn in this study to identify the theoretical constructs of the research framework. STS has particular relevance to understanding organizations in hospitals where resources and social issues have been identified as some of the key challenges in the implementation of IS projects (Heeks, 1999). The STS perspective provides the foundation for an investigation of the social and technological variables that might affect IS outsourcing in hospitals. IP has been drawn to examine the relationship between perceived time pressure and IS outsourcing success at the firm level (Tushman & Nadler, 1978). IP has served as one of the main theoretical frameworks for understanding IS outsourcing (Mani et al., 2010).

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