E-Commerce and IT Projects: Evaluation and Management Issues in Australian and Taiwanese Hospitals

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ABSTRACT

Hospitals and healthcare organizations are facing an increasingly competitive business environment which demands the efficient use and appropriate evaluation of their tangible and intangible resources and competencies in order to continuously improve their organizational performance. The management of e-commerce/IT outsourcing is a crucial management issue for hospitals and healthcare organizations in recent years since only a small proportion of these organizations have reaped the expected benefits from their outsourcing projects. Therefore, the main objective of this article is to better understand the investment evaluation and benefits realization practices and processes of Australian and Taiwanese hospitals that have outsourced their e-commerce/IT systems. This article provides the opportunity to examine outsourcing practices of a highly developed economy (Australia) and a newly industrialized economy (Taiwan). Some e-commerce/IT outsourcing issues and challenges confronted by hospitals in Australia and Taiwan will be identified, discussed and presented. The findings of this study will assist hospitals and other healthcare organizations to formulate appropriate strategies to better handle the potential issues and challenges in undertaking e-commerce/IT outsourcing projects.

KEYWORDS

Australia, Benefits Realization, Case Studies, Electronic Commerce, Healthcare, Hospitals, IT Evaluation, Outsourcing Projects, Taiwan

INTRODUCTION

It is becoming increasingly important for organizations to take advantage of electronic commerce (e-commerce). Retail e-commerce sales worldwide have been estimated to rise by 23.2% to $2.29 trillion in 2017 and are likely to account for 10% of total global retail sales (eMarketer, 2017). Sales are likely to hit $4.48 trillion which will account for 16% of total global retail sales in 2021 (eMarketer, 2017). E-commerce includes trade between business-to-consumers (B2C), consumer-to-consumer (C2C) as well as business-to-business (B2B) trade and utilizes technologies such as the Web, the Internet, intranets, extranets, and electronic data interchange (EDI) to support commercial activities (Cao, Lu, Gupta, & Yang, 2015; Osmonbekov, Zhang, & Dang, 2016; Tan & Ludwig, 2016). E-commerce provides hospitals with increased opportunities for enhancing organizational activities such as exchanging information, coordinating logistics and communications via international hospital supply chains (Elbeltagi, Hamad, Moizer, & Abou-Shouk, 2016; Kurnia, Choudrie, Mahbubur, & Alzougoool, 2015). Commonly adopted e-commerce technologies include the Internet, EDI, Electronic

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Funds Transfer (EFT) and barcodes (Kurnia, Choudrie, Mahbubur, & Alzougoool, 2015; Zeng, Wen, & Yen, 2003). E-commerce uses the open Internet and existing information technology to expand customer value by giving organizations easier access to their internal business systems (Lee, Lim, & Tan, 1999; Yeh, Lee, & Pai, 2015). It also provides the opportunity for organizations to attain a greater degree of Internet connectivity at a fraction of the cost of an in-store trade, and it is an effective mean to share and exchange data and information (Hoque & Boateng, 2017; Lee et al., 1999; Tsao, Lin, & Lin, 2004). In addition, it assists organizations such as hospitals and healthcare organizations to purchase medical supplies in real time as well as to utilize it as a cheaper alternative to enter into new markets (Kurnia, Choudrie, Mahbubur, & Alzougoool, 2015; Raisinghani et al., 2005).

Outsourcing of e-commerce/IT systems has often been used by hospitals and healthcare organizations to control their costs and remain competitive. According to Gartner, global the IT outsourcing service market grew by 4.6% to reach approximately US$285.5 billion in 2016 (Huntley & Blackmore, 2017). The percentage of the total IT budget spent on IT outsourcing increased from 10.6% in 2016 to 11.9% in 2017 (Computer Economics, 2017). However, only 28% of healthcare organizations engage in IT outsourcing activities, which is well below the average for all industries at 53% (Computer Economics, 2017). Nevertheless, IT outsourcing has increasingly become a popular business strategy for all types of organizations (Moon, Choe, Chung, Jung, & Swar, 2016). In particular, it has more impact on hospital productivity in the short run, with the optimal level of IT outsourcing being between 50% and 80% of overall IT spending (Lee, 2017). However, difficulties in quantifying the intangible benefits of e-commerce/IT outsourcing projects are the major concern for hospitals (Cutler & Sterne, 2000; Standing & Lin, 2007; Stockdale, Lin & Stoney, 2005; Torres, 2017). Although the adoption of e-commerce/IT projects can be seen as a strategic move to gain a competitive advantage and boost organizational performance, the difficulty in measuring the less precisely defined technology of e-commerce is problematic for organizations since the physical boundaries between trading partners are usually difficult to separate (Barua, Konan, & Whinston, 2004; Liu, Huang, & Lin, 2012; Melville, Kraemer, & Gurbaxani, 2004; Zhuang, 2005). Organizations need to adopt appropriate evaluation methodologies and approaches to evaluate the new type of organizational capabilities in order to improve productivity of the e-commerce/IT outsourcing investments (Lin, Pervan, Lin, & Tsao, 2008).

The success of benefits realization has been made to link change management, business strategies with the targeted e-commerce/IT investments (Breese, Jenner, Serra, & Thorp, 2015). It is also firmly connected with organizational performance and the main focus has been on value creation (Chih, & Zwikael, 2015). The benefits realization methodologies or processes have not been widely utilized by most organizations and among those that have adopted such practices, their usage might be limited (Lin & Pervan, 2000). There has been a lack of research on benefits realization practices (Breese, Jenner, Serra, & Thorp, 2015; Hellang, Flak, & Pääväärinta, 2013). More research is required on the issue of benefits realization of e-commerce/IT projects to address the ‘Information Paradox’ where there has been a long-running debate in the relevant literature among IT practitioners and researchers (Brynjolfsson & Hitt, 2003; Hellang et al., 2013; Lin, Pervan, & McDermid, 2002). Researchers and practitioners (e.g., Brynjolfsson & Hitt, 2003; Byrd, Lewis, & Bryan, 2006) have argued that the uncertainty over the realization of e-commerce/IT benefits is possibly attribute to difficulty in adopting a proper IT investment evaluation methodology, poor outsourcing management practices, and poor IT investment evaluation processes. Particularly, the practices of e-commerce/IT outsourcing and evaluation in Australian and Taiwanese hospitals and healthcare organizations remain poorly understood and relatively under-researched. Therefore, the main objective of this study is to better understand the investment evaluation and benefits realization practices and processes of those Australian and Taiwanese hospitals that have outsourced their e-commerce/IT systems. One key contribution of this study is that some e-commerce/IT outsourcing issues and challenges confronted by hospitals in Australia and Taiwan will be identified and discussed. The findings will assist hospitals and other healthcare organizations to formulate appropriate strategies to better handle potential issues and challenges in undertaking e-commerce/IT outsourcing projects.
Step Towards Interoperability in Nursing Practice

The Challenges of the IS/IT Projects in the Healthcare Sector