

# Chapter 27

## The Business Value of Information System–Enabled E–Collaboration Capabilities

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### ABSTRACT

*This study aims to understand how firms in developing countries can effectively use their Information System (IS) resources to develop valuable e-collaboration capabilities that in turn improve business performance. A questionnaire-based survey was conducted to collect data from 408 Iranian and Malaysian manufacturing firms. Findings revealed that Supply Chain-Wide Process Integration (SCPI) and Collaborative Knowledge Management (CKM) are key IS-enabled capabilities that enhance performance gain of manufacturing firms. The work found that these capabilities serve as catalysts in transforming the value of IS resources controlled by firms into business performance improvement. The results suggest that SCPI, as a determinant of a highly integrated and dynamic supply chain, is an important intermediate organizational capability through which value of IS resources can be materialized. Likewise, the findings imply that CKM across a given supply network, as a valuable intermediate organizational capability, converts the benefits of both technical and human IS resources into performance gain at the corporate level.*

### 1. INTRODUCTION

A number of IS scholars attempted to understand the mechanism by which IT contributes to performance improvement at the organizational level of analysis (Brynjolfsson and Hitt, 1998). The existing literature on the link between IS and busi-

ness performance is dominated by the Resource-Based View (RBV). The RBV has been used to examine the efficiency and competitive advantage implications of specific firm resources (Barney, 1991; Wernerfelt, 1984). It was also proven to be useful in the IS background, providing a robust framework for analyzing whether and how IS may

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be associated with competitive advantage (Melville, et al., 2004). A number of IS business value scholars attempted to directly link IS resource to performance gain, yet they were sometimes unable to justify this link (Liang et al., 2010). The rubric of the 'productivity paradox,' indicating a weak relationship between IS and productivity was culminated by the affirmations of Carr (2003) in his article "IT Doesn't Matter". Carr (2003) argued that recent ubiquitous and inexpensive IS that are available to all firms cannot be regarded as a source of competitive advantage.

In the early 2000s, some IT scholars argued that this productivity paradox may indeed be the consequence of the way we look at IS affecting business performance (Bharadwaj, 2000; Santhanam and Hartono, 2003). Viewed from the RBV, it was observed that many of inconsistencies in justifying the relationship between IS resources controlled by firms and their financial or operational performance is attributable to the assumption of the direct relationship between IS and business performance (Li and Richard Ye, 1999; Powell and Dent-Micallef, 1997). These scholars proposed that the performance effect of IS may indeed go through some other factors (Bharadwaj, 2000; Melville et al., 2004; Wade and Hulland, 2004). Accordingly, the idea of assuming the third constructs known as 'IS-enabled capability,' as the mediator between IS resources controlled by a firm and business performance was introduced and employed extensively as the surrogate perspective to solve IS productivity paradox (Benitez-Amado et al., 2010a, b; Benitez-Amado and Walczuch, 2012, Fink and Neumann, 2009; Ghobakhloo and Tang, 2014; Jean and Sinkovics, 2010; Rai et al., 2006; Ravichandran et al., 2009; Tang and Ghobakhloo, 2013). From this perspective, IS has an indirect, not a direct, impact on business performance through IS-enabled capabilities. IS-enabled organizational capability perspective explains that a firm's IS resources per se do not enhance business performance, yet they can augment critical organizational capabilities,

or interact with other firm resources, to secure business performance improvement (Bharadwaj et al., 2007; Tian et al., 2010).

Review of literature on IS-enabled capabilities background suggests that majority of prior studies have intended to rationalize IS investment through assessing the mediating role of either internal IS-enabled capabilities or external IS-enabled capabilities. An internal IS-enabled capability is formed inside a focal firm via integrating IS resources with existing resources and practices that can enhance internal control capabilities, strengthen cooperation performance between the departments, and improve capacity of the system and development. New product development effectiveness (Tang and Ghobakhloo, 2013) and IS-enabled innovativeness (Benitez-Amado et al., 2010b) are examples of internal IS-enabled capabilities. An external IS-enabled capability however involves both focal firm and business partners/customers to integrate IS resources for the sake of collaborative practices such as information sharing. Supply chain integration is the most well-known example of external IS-enabled capability (Ghobakhloo et al., 2011; Rai et al., 2006; Wu et al., 2006).

The review of IT-business value literature (Table 5 in the Appendix) indicates that almost all previous studies in this research context have been carried out in developed countries focusing on huge and overpowering firms with billion dollars annual sale. By far, very few studies have tried to understand how firms in developing countries can benefit from valuable IS-enabled capabilities. We need to keep in mind that as compared to firms in developed countries, firms in developing countries face different challenges in managing their IS resources and differ greatly in benefiting from them (Ghobakhloo and Tang, 2014). The IS literature suggests that contrary to firms in developed countries that have access to well-developed, accessible and affordable infrastructure for IS, in most of the developing countries, benefiting from IS has been hindered by the quality, availability,

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