Chapter XVI
A Resource–Based Perspective on Information Technology, Knowledge Management, and Firm Performance

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ABSTRACT

The resource-based view of the firm attributes superior firm performance to organizational resources that are valuable, rare, non-substitutable, and difficult to imitate. Aligned with this view, the authors contend that both information technology (IT) and knowledge management (KM) comprise critical organizational resources that contribute to superior firm performance. The authors also examine the relationship between IT and KM, and develop a new second-order variable – IT-KM competence – with IT capability and KM performance as its formative indicators. Thus, this chapter contributes not only by investigating the determinants of firm performance but also by broadening our understanding of the relationships among IT, KM, and firm performance.

INTRODUCTION

For the last two decades, the investigation of the return on investments in IT has become a key objective of many studies. In pursuing this objective, researchers have developed two main theoretical frameworks: one asserts that IT has a direct impact on firm performance (Bharadwaj, 2000), while the other proposes that the effect of IT on firm performance is mediated by business process (Tanriverdi, 2005). However, no matter which theoretical framework has been employed, some studies have failed to find a significant correlation between IT and firm performance. Because the return on IT investments seems to be contingent, scholars call for more research into why IT may not benefit business, how to make IT effective, and what are the key determinants of the success of IT (Dehning & Richardson, 2002).

Meanwhile, considerable research attention has been devoted to the importance of KM in the rapidly changing, competitive, and dynamic business environment (Holsapple & Wu, 2008). Modern organizations are turning to KM practices and applications to foster the creation, integration, and usage of knowledge assets that enable them to compete in an increasingly global economy. In light of this, researchers have attempted to provide empirical evidence of the strategic consequences that KM can bring to organizations (Grant, 1996). For example, based on the survey data collected from 177 firms, Chuang (2004) finds that greater KM capabilities are significantly associated with greater competitiveness and that social KM resource has a significant impact on competitive advantage. Similarly, in a survey-based investigation of the link between KM activities and competitiveness, Holsapple and Singh (2005) observe that the KM activities of interest can be performed in ways that improve organizational competitiveness, and can do so in each/all of four ways: enhanced productivity, agility, innovation, and reputation.

Although there exist studies on IT-firm performance relationship and on KM-firm performance link, these studies have paid insufficient attention to the full map of relationships among IT, KM, and firm-level return, and have placed relatively less emphasis on the collaborative effect of IT and KM on firm performance (Wu, 2008). Given the inseparability of IT and KM, and the strategic importance of the two, a thorough investigation of both their joint and separate roles in firm performance is necessary. Such investigation would enrich not only the theoretical understanding of the mechanism for competitive advantage, but also the research models investigating determinants of superior firm performance. Thus, the work would be of value not only to practitioners striving to achieve and sustain business success, but also to researchers interested in identifying determinants of better firm performance.

This study contributes to such investigation. More specifically, the purpose of this chapter is to theorize a triangle of relationships among IT, KM, and firm performance, and to develop a theoretical model with testable hypotheses that improve our understanding of the effects of IT and KM on firm performance. The theoretical foundation of this paper is embedded in the resource-based view of the firm and prior work by Holsapple and his colleagues. The current study contributes to the literature in a number of ways. First, this study is among the first to recognize that KM may play an important role in the link between IT and firm performance. Thus, the study may provide a plausible explanation for why some previous research has failed to discover a significant relationship between IT and firm performance. Second, we examine the determinants of firm performance by introducing and employing a new perspective, which focuses on the collective impacts of IT and KM. Such a perspective may broaden our approach to identifying determinants of firm performance. Third, we present methods to measure relevant variables. Therefore, the current chapter is useful

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