IT Resources, IT–Enabled Capabilities, and Business Performance

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INTRODUCTION

A number of IT scholars attempted to analyze the contribution of IT to firm performance, but, the findings were mixed and inconclusive (Brynjolfsson & Hitt, 1998; Caldeira & Ward, 2002). The rubric of the 'productivity paradox,' indicating a weak direct relationship between IT investment and business/firm productivity was culminated by the affirmations of Carr (2003) in his article "IT Doesn't Matter." Carr (2003) noted that recent ubiquitous and inexpensive IT tools are available to all firms, which cannot be considered as a source of competitive advantage and performance improvement.

More recent IT scholars attempted to draw on the so-called 'IT-enabled organizational capability' perspective to link IT and business performance improvement. This work therefore aims to provide a blueprint to guide future research to better access to the current understating of IT business value. We hope that our propositions and research agenda can assist future research to better explore the mechanism by which the value of IT resources can be transformed into the performance improvement for businesses.

BACKGROUND

In the early 2000s, some IT scholars argued that this productively paradox may indeed be the consequence of the way we look at IT affecting firm performance (Bharadwaj, 2000). Viewed form Resource-Based View (RBV), it was observed that many of inconsistencies in justifying the relationship between IT resources controlled by firms and their financial or operational performance is attributable to the assumption of the direct relationship between IT and performance (Li & Richard Ye, 1999; Powell & Dent-Micallef, 1997). These scholars proposed that the performance effect of IT may indeed go through some other factors (Bharadwaj, 2000; Melville et al., 2004; Wade & Hulland, 2004). Accordingly, the idea of assuming the third constructs known as 'IT capability' or 'IT-enabled organizational capability', as the mediator between IT resources controlled by a firm and firm performance was introduced, and further employed extensively as the surrogate perspective to solve IT productivity paradox (Benitez-Amado et al., 2010a, b; Benitez-Amado & Walczuch, 2012, Fink & Neumann, 2009; Rai et al., 2006; Ravichandran et al., 2009; Tang & Ghobakhloo, 2013).

Despite recent efforts to understand the mechanism by which IT interacts with organizational issues and consequently creates performance improvement, we still have limited understanding of these relationships (Benitez-Amado & Walczuch, 2012), and new IT-enabled capabilities are being introduced continuously into the IT business value background. Our review of literature on IT-enabled research background revealed that previous studies investigating the association between IT and firm performance are divergent in how they conceptualize key constructs such as IT resources, and their interrelationships. We also observed that a considerable inconsistency is also associated with the way previous scholars specify the key constructs in this

Figure 1. Direct-effect vs. indirect-effect model
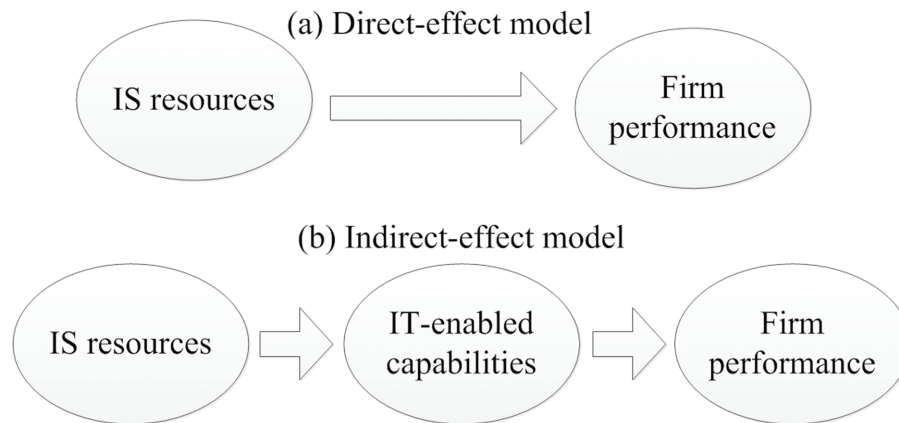
research context (reflective specification vs. formative specification).

THE REMEDY TO PRODUCTIVITY PARADOX: IT-ENABLED CAPABILITY PERSPECTIVE

We mentioned that recent IT value researchers believe that the inconsistency in justifying the direct relationship between IT resources controlled by firms and financial or operational performance is attributable to the assumption of the direct relationship between IT and performance (Tang & Ghobakhloo, 2013). Review of prior works in this particular research context recommends that almost all prior studies which drew on IT-enabled capability perspective to explain the business value of IT were successful in linking between IT resources and firm performance. Consistently, Liang et al. (2010) in their meta-analysis demonstrated that the indirect-effect (mediated) model with organizational capabilities can better explain the value of IT than the direct-effect model without organizational capabilities (Figure 1).

IT-enabled capability is a bi-dimensional construct composed of two different dimensions: (1) IT capability (in a general sense or pertinent to a particular practice), and (2) IT-enabled higher order organizational capability. Our review of existing indirect-effect models reveals that IT resource, IT capability, IT-enabled higher order organizational capabilities and firm/business performance are the four key constructs frequently used by IT scholars in modeling the business value of IT. We also observed that the four different conceptualizations for the interrelationships among these key constructs have been proposed by existing studies. Figure 2 demonstrates these conceptualizations. This figure clearly explains that in none of the existing conceptualizations IT resource is proposed to be a direct antecedent to the firm performance.

- The conceptualization (a) proposes that IT capability in broad or specific terms can directly result in performance improvement (e.g., Fink & Neumann, 2009; Tanriverdi, 2006).
- Conceptualization (b) is the most frequently used proposition among existing indirect-effect IT value models which suggests that IT-enabled higher order organizational capabilities fully transform the value of IT resources into performance improvement (e.g., Banker et al., 2006; Benitez-Amado et al., 2011a and b; Ghobakhloo et al., 2011; Wu et al., 2006).
- The second most commonly used conceptualization is conceptualization (c) which does not concern the role IT resources and proposes that IT capability (in broad or specific terms) creates IT-enabled higher order organizational capabilities (e.g., Rai et al., 2006; Tanriverdi, 2005). This composition generally suggests that the effect of IT capabilities on performance improvement is mediated by IT-enabled higher order organizational capabilities.

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