Inter-Organizational IT Capability in China: An Empirical Analysis of Dimensions and Influences

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ABSTRACT

Prior studies of information technology (IT) capability mostly focused on dimensions and effects of IT capability at intra-organizational level in western context. This paper extends intra-organizational IT capability to inter-organizational IT capability, specifically examining process-oriented inter-organizational IT capability from a process-oriented perspective in an emerging market context. The authors use survey data from Chinese firms to identify dimensions of inter-organizational IT capability and validate its scale, compare the differences of inter-organizational IT capability in firms with three types of ownership structure, and test the relationship between these inter-organizational IT capability dimensions and firm performance. A comparative analysis reveals that seven inter-organizational IT capability measures identified in Chinese context are extended or more important than in the Western context. Empirical results show that inter-organizational IT capability varies between state-owned enterprises and non-state-owned enterprises. It is also found that four dimensions of inter-organizational IT capability have different impacts on firm performance.

Keywords: Chinese Context, Dimension, E-Business, Firm Performance, Inter-Organizational IT Capability, Ownership Structure

INTRODUCTION

Inter-organizational information technologies surpass the internal limits of organizations, and undoubtedly influence the development of distinct organizational capabilities, including the way the company performs activities and manages external information. Therefore, many large and traditional firms invest in business-to-business e-business technologies to strengthen online connections with customers, disseminate product information, facilitate transactions, improve customer services, and manage inventory via electronic links with suppliers (Zhu, 2004). The rapid and efficient flows of infor-
This study attempts to fill these gaps in the IS literature by conceptualizing and measuring process-oriented inter-organizational IT capability and investigating the linkages among inter-organizational IT capability, ownership structure and firm performance in Chinese context. Key research questions motivate our work are: what constitutes firms’ inter-organizational IT capability in Chinese context? How might such a capability be measured? What kind of relationship might exist between organizational ownership structure and inter-organizational IT capability? How are different dimensions of inter-organizational IT capability related to perceived firm performance?

To answer these questions, we conceptualized the inter-organizational IT capability grounded on the resource-based view of the firm. We then gave a logical analysis of why national culture and ownership structure may have impacts on inter-organizational IT capability dimensions, and discussed how inter-organizational IT capability is related to firm performance. Following this, we proposed a set of measures for inter-organizational IT capability at inter-organizational level. Further, we collected data to validate these measures and examined the linkages among inter-organizational IT capability, ownership structure and firm performance. Finally, we concluded with a discussion of implications for theory, practice, and future research directions.

THEORETICAL DEVELOPMENT

Inter-Organizational IT Capability

Following the resource-based view, several scholars provide the definitions and dimensions of IT capability. We reviewed the academic literature on IT/e-business capabilities published in major IS journals (e.g., Information Systems Research, Journal of Management Information Systems, MIS Quarterly, Information and Management, International Journal of Electronic Commerce, and Journal of Strategic Information Systems, etc.) during the period from 1995 to 2010. Most researchers understood
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