

# An Empirical Investigation of Capability Factors Affecting Strategic Information System Planning Success

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## ABSTRACT

*Strategic information systems planning (SISP) is more difficult in today's world of rapid change and uncertainty. The dynamic changes in the environment require a fit between SISP and internal resources of the firm. A need exists to study SISP success based on a broad set of organizational attributes of firm. In this regard, a resource-based view (RBV) has gained increasing dominance in the strategic management field and views organization as a bundle of resources. Reviewing SISP literature reveals little on what the essential Information Systems' formulation (IS) capabilities for SISP are and how they affect success. In this study, the relationship between capability factors and SISP success are explored. Capability factors were compiled through literature review and validated by using interviews. Hypotheses were developed and tested utilizing responses collected from 167 medium to large Iranian organizations. Using PLS for data analysis, the results show the important role of capability factors in SISP success that could be beneficial for both practice and research.*

**Keywords:** *Capability Factors, Organizational IS Capabilities, Resource-based View (RBV), Strategic Information, Strategic Information Systems Planning (SISP)*

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## INTRODUCTION

Today, organizations are facing more economic uncertainty, more complex technologies and more hastily innovations. Additionally, development requirements have forced organizations

to use more effective and efficient Information Systems. Annually, a large amount of organizational expenditures is spent on Information Systems' (IS) formulation, implementation and maintenance (Carr, 2004; Nash, 2008). Investment in information systems requires a large amount of firms' capital but studies have shown that almost half of the IS initiatives are unsuc-

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successful (Nash, 2008; Ward & Peppard, 2002). Basically, those failures are the result of poor strategic information systems planning (SISP) (Bechor et al., 2010). To make those investments more effective, SISP has been adopted prior to IS implementation (Tianmei & Baowen, 2007). Thus, information system strategic planning has become a critical success factor of many companies. According to Bechor et al. (2010), SISP is the strategic thinking process that determines the most desired information systems (ISs) for organizations to enhance and implement long-term IS policies and activities. Despite a lot of research in the topic area (e.g., Segars & Grover, 1998, 1999; Grover & Segars, 2005; Bechor et al., 2010; Newkirk et al., 2003, 2008; Warr, 2006; Cerpa & Verner, 1998; Sabherwal & King, 1995; Pyborn, 1983; Chi et al., 2005; Wang & Tai, 2003; Cohen, 2008), SISP is still ranked as highly critical issue for firms.

There are frequent calls for studying the interrelationships between organizational aspects and SISP success (Lee & Bai, 2003; Lee & Pai, 2003). Although, there are some studies (e.g., Duhan, 2007; Lee & Pai, 2003) that paid attention to SISP success research based on organizational aspects, their narrow perspective is the main weakness of such those studies. The evidence from previous studies indicated that research focused on the relationship between firm-wide organizational aspects and SISP success is still limited. A major weakness of these studies was that the researchers did not perceive organization as a bundle of activities, resources, assets, and processes which directly or indirectly affect SISP success. Studies of the organizational side of the SISP success are not comprehensive enough to consider all factors. Possibly, incorporating the Resource-Based View of the firm (RBV) will enable better filling of this gap due to consideration of the firm as a set of resources and capabilities.

RBV perspective has gained increasing dominance in the strategic management field and views organization as a bundle of resources (Sambamurthy & Zmud, 1994; Lee et al., 1995; Ross et al., 1996; Feeny & Willcocks, 1998a, 1998b; Bharadwaj & Sambamurthy, 1999;

Bharadwaj et al., 1999; Bharadwaj, 2000; Chen, 2001; Bassellier et al., 2001; Morris, 2006; Calderia & Dhillon, 2010; Doherty & Terry, 2009; Stoel & Mohanna, 2009). Based on RBV's strategic logic, the organization's operative rationale for achieving its goals is through coordinated deployment of its resources. By applying RBV in IS management, the notion of IS capability emerges that considers developing and leveraging business value through IS. As Peppard and Ward (2004) have proposed, this can be assumed as the fourth era in IS management field.

Based on the discussions above, two areas of questioning arise. The first are related to the need to consider organizational aspects of the firm in SISP success studies. The second area is a result of the application of RBV theory to investigate SISP. Both of these suggest that it would be valuable to conduct an examination of the role of capability factors (i.e., organizational aspects in RBV theory) on SISP success. As an outcome of insufficient empirical studies, the literature reveals little about the relationship between RBV constructs (e.g., IS capabilities) and successful SISP. Thus, there is a clear need for an empirical research to explore those constructs and their relationship between each other.

## THEORETICAL BACKGROUND

Though there is a broad range of research on IS capability and on SISP success, particular literature on the relationship between IS capability and SISP success is scarce (Duhan, 2007). The following section explores the main conceptualizations of IS strategic planning success as found in the literature. The aim of this exploration is to appropriately adopt a conceptual model, based on RBV theory, for IS strategic planning success to be utilized in this study.

Since there is no established model for organizational capabilities on SISP success, a review of related literatures was conducted to identify the capability constructs related to SISP success. Following the investigation of IS capability link in SISP theory as suggested by

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