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# IS outsourcing management competence dimensions: instrument development and relationship exploration

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**Abstract**

In this paper, we discuss our investigation of IS outsourcing management competences, their relationships and measurement. First, three theoretical perspectives were applied to explain the nature of the IS outsourcing phenomenon. Second, IS outsourcing management competence dimensions and their measures were generated, based on the literature. Third, data was then gathered to refine measures empirically and test proposed competences and their relationships. The theoretical development and empirical testing filled the gap in IS outsourcing management competence research resulting in important implications for IS outsourcing practitioners.


*Keywords:* Empirical research; IS outsourcing management competence; Knowledge management; Transaction costs; Agency theory; Inter-organizational process

## 1. Introduction

In research studies, determinants [2,44,64] and best practices of IS outsourcing [3,25,40,57,37,38,46] have been investigated and discussed. IS outsourcing related costs, risks, and pitfalls have also been considered [7,16,29]. Consequently, in practice, firms need to have the necessary IS outsourcing management ability to evaluate the determinants and implement best practices that can reduce costs, contain risks, and avoid pitfalls in IS outsourcing. They should be able to accurately measure IS service performance both before they sign the contract and throughout the process [66]. Thus, a set of IS outsourcing management competence dimensions and their relationships may work as credible guides in helping firms understand the necessary IS outsourcing management needs and develop them subsequently [12,56,65].

While many case studies and some surveys exist, e.g., [10,42,43], apparently no survey based IS outsourcing management competence research has been performed. This paper is intended to fill the gap.

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## 2. Theoretical perspectives on IS outsourcing

### 2.1. An inter-organizational process based perspective

Dwyer et al. [15] proposed a model for a seller-buyer relationship developmental process consisting of four stages: awareness, exploration, expansion, commitment, and dissolution. Ring and Van de Ven [55] view "the development and evolution of a cooperative IOR as consisting of a repetitive sequence of negotiation, commitment, and execution stages, each of which is assessed in terms of efficiency and equity." An IS buyer–supplier relationship is an inter-organizational relationship (IOR) involving all the stages and dynamics. This process perspective helps clarify the fact that various stages of IS outsourcing may require different sets of skills and routines and thus helps identify the scope of the IS outsourcing management competence.

### 2.2. A knowledge management based perspective

In the information intensive and knowledge based post-industrial society [28], a view of the firm as an institutional mechanism to integrate knowledge is insightful and meaningful [23]. This is similar to combinative capability in [30] in the sense that both focus on a firm's capability to flexibly and efficiently assemble a diversity of knowledge for more effective and efficient production in order to achieve competitive advantage. Outsourcing is a part of the way that firms assemble knowledge from suppliers [52]. Thus, IS outsourcing can be seen as a mechanism to integrate IS knowledge from IS vendors [41]. Further, IS outsourcing may encourage the generation of new ways to use IS for better organizational performance through positive interactions, with some chaos between the buyer and the vendor [48]. Finally, some academics have concerns regarding the potential loss of internal know-how through IS outsourcing [67].[1] We believe that a knowledge management-based perspective of IS outsourcing can help determine ways of avoiding loss of important knowledge and nurturing an organizational learning capability.

[1] A reviewer pointed out the potential loss through IS outsourcing. Willcocks et al. point out that this effect is not fully understood.

### 2.3. An economics based perspective

Two related streams, transaction costs economics (TCE) and agency theory, have been used while investigating the buyer–supplier relationship. TCE is focused on the organizational boundary, while agency theory has been focused on the contract between the two involved parties [17]. Factors in the transaction cost model (TCM), such as demand and technological uncertainty, and asset specificity [68], and those in agency theory, such as non-separability of performance among team members [1] and task programmability (i.e., knowledge of a production process) [18,50], are influential in choosing the IOR structure and process [45].

An IS buyer–supplier relationship will certainly be impacted by the transaction costs and these factors. Grover et al. found that asset specificity of transactions needed to be considered for a high level of IS outsourcing effectiveness [24]. Lacity and Hirschheim [35,36] pointed out that the measurement uncertainty may generate opportunistic behaviors on the part of an IS vendor. Aubert et al. [5] applied a TCM including both asset specificity and uncertainty to analyze the level of IS outsourcing. Thus, an economic perspective inspired us to pursue an answer to: what IS outsourcing management competences are necessary to deal with these TCE and agency theory related factors?

## 3. IS outsourcing management competence dimensions and their relevance to theoretical perspectives

Four IS outsourcing management competences, informed buying, contract facilitation, contract monitoring, and vendor development, have been conceptualized in [19] and these competences are a part of the IS services delivery capabilities. The following paragraphs will review their definitions and establish their relevance to theoretical perspectives.

### 3.1. Informed buying and its relevance to theoretical perspectives

Informed buying is the capability of IS purchasing personnel to manage the IS sourcing strategy that