Chapter 2

B2B Relationships in Modern Times: Implications of Relation-Specific Information Systems on Governance Forms

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ABSTRACT

Information technology (IT) enables businesses to integrate information systems across entities without altering the firms' legal boundaries. New forms of inter-firm dependence and governance mechanisms may arise, due to the explicit investments made in technology and systems for collaboration purposes. There is an important distinction between general and customized investments in inter-organizational information systems (IOS), because the specificity level in IT exhibits certain characteristics that accentuate both the risk and value of inter-firm trade. Several research calls were made to validate governance theories on IOS. Based on a literature review, this paper provides a synthesis and integration of transaction cost economics (TCE) and IOS literature regarding governance forms. The paper discusses why the specificity level of IOS plays a central role in modern collaboration between firms, and how vertical electronic coordination (VEC) represents a mechanism for electronic governance forms and presents an agenda for future research.

INTRODUCTION

It has been claimed that transaction cost economics (TCE) “is perhaps the single most influential theory found in the social sciences” (Teece & Carroll, 1999, p. 3), an assertion that has been substantiated recently by the presentation of the 2009 Nobel Prize in Economics. While Coase (1937) originally introduced the transaction cost concept, Williamson (1971, 1979, 1991a) developed it by identifying the most important dimensions through which a transaction could be...
mapped onto an appropriate form of governance, described as a continuum of market to hierarchy (Masten, 1996). TCE has become an important anchor for analyzing a wide range of economic and organizational issues. Although the core focus of TCE is at the dyadic level of business relations, it has also recently challenged a broader systems perspective, as in supply chain relationships (Williamson, 2008).

While it is true that the use of information technology (IT) has transformed business practices, especially for vertical coordination (Lajili & Mahoney, 2006), this seems to have had a minor impact on theoretical and empirical works within TCE. Academic journals within marketing and strategy contain only a small number of articles that recognize how investments in inter-organizational information systems (IOS) can change the content and form of relationship between suppliers and buyers. Most mainstream empirical studies in these journals still adhere to conceptualizations and measurements developed more than 20 years ago.

Academic journals within the field of information systems (IS), however, have increasingly focused on how information technology can impact transaction costs and governance form. The early work of Malone, Yates, and Benjamin (1987) argued that IT would lead to lower transaction costs and an overall shift toward greater use of markets, rather than hierarchies, to coordinate economic activities. Later TCE-based works led to contradictory results. Clemons and Reddi’s (1993) study found that IT users favor collaborative relationships (the ‘Move to the middle’ hypothesis), while Hart and Estrin (1991) suggested that IT investments create initiatives for organizations to internalize their activities. More recent studies have indicated that IT investments can promote both loosely and tightly coupled organizational forms, depending upon how the infrastructure is standardized across industries (Sahaym, Steensma, & Schilling, 2007).

Based on a literature review, the purpose of this paper is to discuss the opportunities to establish a ‘hybrid’ research area, by melting knowledge from IOS research with a traditional TCE framework. In particular, the paper focuses on how the implementation of relation-specific information systems can change governance mechanisms of business-to-business relationships.

The paper is organized as follows. First we present a short review of the traditional approach and applications of TCE, focusing on the main dimensions that comprise a transaction. It also includes a section describing some extensions of the traditional approach in order to explain and predict relational governance. Then we outline a taxonomy of IOS research from a governance perspective, and turn to a discussion on the specificity aspect of IOS in B2B relationships. Finally, a strategy for further research is proposed. It focuses on several implications of relation-specific information systems on B2B relationships, with a particular focus on how investments in customized IOS can lead to hybrid governance forms.

**Transaction Cost Economics (TCE)**

Coase (1937) introduced the concept of transaction costs. This concept was extended by Williamson (1975, 1979, 1981, 1985), who postulated that the composition of certain transaction attributes determines the most cost-efficient mode of governance. TCE retains the transaction as the basic unit of analysis.

**The Traditional Approach to TCE**

Transaction cost theory has traditionally focused on the dichotomy between market and hierarchical governance (Williamson, 1975). The main focus was the circumstances in which a transaction is more cost-efficiently performed; within a firm or outside by market governance. Market governance
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