

# Factors affecting trading partners' knowledge sharing: Using the lens of transaction cost economics and socio-political theories <sup>☆</sup>

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## Abstract

Knowledge sharing allows trading partners to orchestrate the operation of supply chain and capture positions of advantage. Yet, lack of knowledge sharing has been consistently found to be the most critical failure factor in supply chain management. This paper intends to study the factors affecting trading partners' entering knowledge sharing ties. Drawing upon transaction cost economics and socio-political theories, we developed our research framework. The hypotheses derived were tested by data collected with six medium-sized companies. Data analysis showed that socio-political factors were more robust in affecting the focal firm's decision on whether to share knowledge with a particular partner. In particular, trust towards the partner and the partner's power were the primary factors leading the firm to enter the knowledge sharing ties. In contrast, asset specificity did not play an important role in affecting the firm's knowledge sharing decision. Theoretical contribution and practical implications are discussed.

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## 1. Introduction

As a society moves from the industrial to the knowledge age, knowledge is brought to the forefront as a factor of production and identified as the asset fundamentally responsible for organizational success [24,34]. Sharing knowledge allows the participating organizations to integrate their knowledge, detect the window of opportunities in the marketplace and capture positions of advantage [20,40,58,64]. In particular, sharing knowledge between trading partners may enable the firms to orchestrate activities in the supply chain, such as concerted demand forecasts and replenishments. Nevertheless, the great

potential benefits of knowledge sharing do not lead most firms, especially small and medium enterprises (SMEs), to enter such cooperative relationships. Lack of knowledge sharing with trading partners has been consistently found to be the most critical failure factor in supply chain management [16]. Our interest in the phenomenon of insufficient knowledge sharing in supply chains motivated our research reported in this paper.

There is an extensive literature on interorganizational knowledge sharing, besides that in popular press and magazines (e.g., [9,21,41,62]). The extant literature has been focused on whether to share knowledge and how to manage the sharing relationship. It does not provide enough cues to decide with whom firms should share knowledge and how knowledge can or should be shared. The purpose of this reported study was to address the first question by examining the antecedents of knowledge sharing in a dyadic context. In particular, we focus on knowledge sharing between trading partners through Internet-based computing and communications means. Our research questions

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are the following: (1) What are the factors affecting the organization's predisposition to share knowledge with a particular partner? (2) How do these factors affect the organization's decision on whether to share knowledge with this partner?

In this study, we integrate transaction cost economics [75] and socio-political theories [52] to develop a research framework. These two schools have different assumptions about the firm and offer different explanations for interorganizational cooperation. Drawing on these theories, we derive hypotheses on how economic and socio-political factors affect the organization's predisposition to share knowledge with a particular partner. The theoretical model was tested by data collected from six medium sized organizations sharing knowledge with some of their trading partners in Singapore.

The rest of the paper is organized as follows. The second section describes the theoretical background of our study. In the third section, we present our conceptual model by drawing upon transaction cost economics, socio-political and information systems theories. Section four is the discussion about our research methodology. The fifth and sixth sections present our research findings, and discussion and conclusion.

## 2. Theoretical background

Knowledge is defined as a justified belief that increases an entity's capacity to take effective action [2,30,48]. It is a fluid mix of framed experiences, values, contextual information and expert insights that provides a framework for evaluating and incorporating new experiences and information [13]. Knowledge can be either tacit or explicit. Tacit knowledge refers to knowledge that has a personal quality, making it hard to articulate or communicate. An example of tacit knowledge is the knowledge of an expert golf player [78]. In contrast, explicit knowledge refers to knowledge that is articulated in some symbolic form, such as spoken or written words, mathematical or chemical formulas [2]. Tacit and explicit knowledge are mutually constituted rather than mutually exclusive [67]. Although tacitness is a necessary component of all knowledge [24], it can be converted to an explicit form through linguistic expressions [47]. On the other hand, explicit knowledge is always grounded in a tacit component [54]. In general, the higher the degree of tacitness of knowledge, the higher the conversion cost and the more difficult the transfer.

The organization's ability to create, acquire, integrate and deploy knowledge quickly is believed to be the only source of sustainable competitive advantage in today's knowledge economy [76]. In addition to managing the internal knowledge [59], leveraging knowledge distributed in its network is critical for the organization's competitiveness [15,58]. Sharing knowledge with others allows the organization to integrate knowledge from different sources, detect the windows of opportunities in the marketplace and capture positions of advantage [20,40,58,64]. Indeed, inter-

organizational knowledge sharing has been consistently found to be critical for the organization's competitive success [41,42]. For example, more than two-thirds of innovations could be traced back to a customer's initial suggestions or ideas [69].

On the other hand, cost efficient interorganizational knowledge sharing is enabled by the advances of information communication technology, especially the emergence of Internet-based computing and communication. By removing the physical, spatial and temporal limitations of communication, which hinder effective knowledge sharing, these interorganizational systems facilitate the creation, storage, transformation and transmission of knowledge [25]. Knowledge with a higher degree of explicitness can be exchanged by communication means with lower cues, such as electronic adaptive learning systems that adjust to stimuli and provide fast feedback [41]. By contrast, communication means with higher cues, such as shared discussion databases, videoconferencing or electronic document-based systems, can convey knowledge with a higher degree of tacitness through dialogue and interaction [61].

Due to the economic feasibility and efficiency enabled by Internet-based computing and communication, knowledge sharing across organizational boundaries has become a popular topic for researchers and practitioners. The extant literature on interorganizational knowledge sharing can be divided into four main categories. The first category studies the motivation for knowledge sharing between organizations. The second category examines the impacts of interorganizational knowledge sharing on the firms' performance (e.g., [27]). The third category focuses on the management of the knowledge sharing process [41]. Finally, the fourth category examines the potential benefits of interorganizational knowledge sharing using mathematical modeling (e.g., [9,21,62]). While the extant literature on interorganizational knowledge sharing helps the organization determine whether to share knowledge and how to manage a sharing relationship in general, it does not provide enough cues to decide with whom the organization should share knowledge and how knowledge can or should be shared between firms. The purpose of this reported study is to examine factors affecting the organization's predisposition to share knowledge with a particular trading partner and how these factors affect the focal firm's decision-making on knowledge sharing. A literature review reveals that transaction cost economics [75] and socio-political theories [52] provide different explanations for interorganizational cooperation, with different assumptions about the organization.

### 2.1. Transaction cost economics

With the assumption of bounded rationality and the impossibility of drafting complete contracts, transaction cost economics (TCE) begins with the premise that boundary decisions are based on a comparison of the

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