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Assessing the contingent effects of collaboration on agility performance in buyer–supplier relationships

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ABSTRACT

Several studies in the buyer–supplier relationship literature have addressed the impact of collaboration on agility performance. While some studies have concluded that collaboration leads to beneficial effects, others have questioned the positive effects of collaboration on relationship performance. Drawing on contingency theory and transaction cost economics (TCE), we seek to better understand the linkage among collaboration, trust and agility performance in a buyer–supplier relationship. Further, we study the contingent influence of requirements certainty and supplier asset specificity, two key TCE constructs in buyer–supplier relationships, on the collaboration–agility performance relationship. We show that while trust mediates the impact of collaboration on agility performance, the indirect effect of collaboration on agility performance via trust is significant only beyond a threshold level of collaboration. The theoretical implication of this result is that the performance relationship is non-linear, a result that has not been recognized in current literature. The practical implication is that organizations need to establish a certain level of collaboration before its positive impact can be realized. In addition, we show that the impact of collaboration on agility performance in buyer–supplier sourcing relationships can be *positive*, *negative* or *neutral* depending on the levels of trust, supplier asset specificity and requirements certainty, emphasizing the need to develop contingency theories.

1. Introduction

The buyer–supplier relationship literature is rich in highlighting the importance of suppliers in increasing the market responsiveness of firms by bringing new products to market faster (e.g., Choi and Krause, 2006; Petersen et al., 2005). The criticality of the role of suppliers in promoting a buyer's responsiveness is heightened especially when companies focus on what they do best, and outsource the remaining activities to suppliers (Gottfredson et al., 2005). Several studies have noted that strategic buyer–supplier outsourcing relationships improve a firm's ability to be agile in their product markets (Holcomb and Hitt, 2007; Quinn and Hilmer, 1994). Within this context, agility performance is referred to as the extent to which the buying firm enhances its product portfolio by reducing development times and is responsive to its customers (Swafford et al., 2006; Youndt and Snell, 2004). Agile firms demonstrate superior product development performance through speedier product launches (Sambamurthy et al., 2003; Swafford et al., 2006; Youndt and Snell, 2004). Recently, several practitioner articles have stressed the importance of using supplier relationships to gain agility performance. For example, Barrar and Gervais (2006, p. 44) note that "*outsourcing is regarded as a means of achieving a step change in performance, agility and customer service.*" Similarly, Cohen and Young (2006) note that a majority of current buyer–supplier outsourcing relationships focus on agility performance in terms of new product introductions and improvements for buyers. Most recently, a senior executive (Thia Breen) from The Estée Lauder Companies was quoted in an article titled "The Global Stage" (Moe, 2014, p. 15) that customers "*expect the newest groundbreaking technology and products*," emphasizing that "*The key to sustainable growth . . . is agility. Many organizations that do this well are able to quickly read and convert market information into insights. . . to maximize high-growth opportunities*." Thus, agility performance is a critical element of buyer–supplier relationships. However, theoretical perspectives on improving agility

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performance via collaboration and trust in buyer–supplier relationships seem to be incomplete because of the continuing debate in the literature regarding the "dark side" of collaboration. We posit a contingency theory perspective in this paper to advance current understanding of the impact of collaboration on (agility) performance.

Collaboration with suppliers is important to gain superior agility performance (Heric and Singh, 2010). Specifically, collaboration facilitates "*full utilization of external suppliers' investments, innovations, and specialized professional capabilities*" (Quinn and Hilmer, 1994, p. 43). Despite the emphasis on collaboration as a means to achieve agility performance, practitioners note that gaining these outcomes via supply relationships remains elusive (Heric and Singh, 2010). Thus, an examination of the impact of collaboration on performance in strategic buyer–supplier relationships is merited given its importance in the literature and to practice. In this research, we focus on how firms can improve agility performance in buyer–supplier relationships and study the contingencies that influence agility performance arising from collaboration. Our research contributes to current literature in the following ways.

First, we examine important moderators of the relationship between collaboration and agility performance. Collaboration is an important aspect of leveraging a supplier's strength (e.g., Dyer and Singh, 1998; Holcomb and Hitt, 2007). Collaborative relationships are characterized by shared values and norms of cooperation, information exchange, and a high degree of management involvement between the buyer and the supplier (Cannon et al., 2000; Hoegl and Wagner, 2005). These attributes of collaboration can be helpful in gaining agility performance (Narasimhan and Das, 2001; Vickery et al., 2003). While several studies have indicated the beneficial effects of collaboration (e.g., Holcomb and Hitt, 2007; Jap, 1999; Quinn and Hilmer, 1994), recent literature suggests that collaboration can also be detrimental to sourcing relationships (Anderson and Jap, 2005; Jap, 1999; Rossetti and Choi, 2005; Villena et al., 2011). An explanation for these contradictory findings in prior research may have been the omission of important moderators that enhance or detract from the relationship. Thus, an examination of factors that moderate the link between collaboration and agility performance is warranted.

Second, we jointly examine the relationship among trust, collaboration and agility performance. Trust is a key relational outcome of collaborative environments (Cannon et al., 2000; Carson et al., 2003; Dyer and Chu, 2000). Specifically, the social embeddedness perspective suggests that trust is a by-product of partner interactions (Doney and Cannon, 1997; Dyer and Chu, 2000; Granovetter, 1985; Morgan and Shelby, 1994; Zacharia et al., 2009). Further, trust significantly influences the performance of a relationship (Doney and Cannon, 1997; Dyer and Chu, 2000, 2003). Gains from trust are also rooted in transaction cost logic. Specifically, trust lowers transaction costs in a relationship, minimizing the need for formal contracts and repeated negotiations (Dyer and Chu, 2003), particularly in ongoing relationships. Trust allows the partners to invest less time and resources to monitor each other's activity and invest more resources in achieving the objectives of the relationship (Dyer, 1997). However, a vast majority of the literature that examines the trust-performance relationship assumes that it is not contingent on the context in which it is studied (Carson et al., 2003). Analyzing contingencies is particularly important in light of recent practitioner surveys that emphasize the need to study trust and collaboration together in order to achieve superior buyer–supplier relationship performance (Economist Intelligence Unit, 2008). Specifically, the study conducted by the Economist Intelligence Unit notes, "*very few collaborators totally trust their counterparties (people or organizations)*" (Economist Intelligence Unit, 2008, p. 6). In line with this observation, MacDuffie and Helper (2006) note that collaboration without trust is a feature of firms that experience poor performance. We add to the literature on collaboration by taking a contingent view of the relationship among collaboration, trust and performance by. By adopting a moderated mediation perspective (Preacher et al., 2007), we suggest that the relationship among collaboration, trust and performance is more nuanced than suggested in the literature.

Third, we investigate the contingent influences of supplier asset specificity and requirements certainty on the impact of collaboration on agility performance. Transaction cost economics (TCE) literature notes that both uncertainty and asset specificity are determinants of transaction costs (Walker, 1994; Walker and Poppo, 1991). The use of specific assets is associated with superior performance in a buyer–supplier relationship (Handfield and Bechtel, 2002). However, empirical evidence of the role of specific assets and its interaction with collaboration between the buyer and the supplier has not been investigated. In a recent article on asset specificity, De Vita et al. (2011) note that the interactive influence of asset specificity on buyer–supplier relationship outcomes have been studied less.

Finally, consistent with the tenets of contingency theory, we investigate the boundary conditions in which the impact of collaboration is beneficial for the focal firm. Identifying the boundary conditions around the phenomenon under investigation enables the development of richer theory and is consistent with the views of contingency theory (Luthans and Stewart, 1977; McMahon and Perritt, 1973). We draw on these views to develop a context-based understanding of the impact of collaboration on agility performance. The remainder of the paper is organized as follows. In Section 2, we present the theory and develop our research hypotheses. In Section 3, we describe the research methodology and provide an overview of the measures. In Section 4, we present the results of our analysis. We discuss the implications and conclude in Section 5.

2. Theory and hypotheses development

2.1. Theory

Our theoretical lens for the hypothesis development is predicated on the logic of transaction cost economics (TCE). Within the buyer–supplier relationship literature, TCE is a prominent theory that has been widely used to examine performance implications in buyer–supplier relationships (Williamson, 1999, 2008). The primary constructs of importance related to governance in the TCE perspective are asset specificity, uncertainty and transaction frequency (Grover and Malhotra, 2003). Asset specificity relates to the degree to which transaction specific assets are invested in the relationship (Geyskens et al., 2006). According to Grover and Malhotra (2003, p. 459), a high degree of assets that are specific to the relationship "*represent costs that have little or no value outside the exchange relationship*." In addition to increasing external coordination costs, specific assets introduce risks such as possible hold-up due to opportunism (Grover and Malhotra, 2003). The risk of opportunism can lead to additional costs of monitoring and coordination (Chiles and McMackin, 1996). Uncertainty is the next important element of TCE. Specifically, uncertainty is a disturbance source to which the buyer–supplier relationship must adapt (Jayaraman et al., 2013). In this study, we focus on uncertainty related to the scope of the relationship. This has been asserted as a critical aspect in the buyer–supplier and outsourcing literatures (Narasimhan et al., 2010, Sanders et al., 2007). Greater uncertainty requires additional coordination costs and also generates additional risks of performance failures (Grover and Malhotra, 2003). In the context of an ongoing buyer–supplier relationship, this study focuses on asset specificity and uncertainty as key constructs.