Chapter V

Buyer-Supplier Relationships in Business-to-Business E-Procurement: Effects of Supply Conditions

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Abstract

This study explores the resource dependency and relational exchange theories to understand firms' participation in e-procurement and seeks to determine the degree to which the resource dependency theory variables—supply importance, supply complexity, supply market dynamism, and availability of alternatives—affect information exchange and operational linkages, the relational exchange theory variables. Data was gathered from the Institute for Supply Management and the Council of Logistics Management members using the survey technique. Supply importance and supply complexity primarily predict information exchange and operational linkages. Study findings reconfirm the important impact of environmental and market uncertainty on firm responses as echoed in past studies.
Introduction

Procurement typically accounts for the largest expense item in a firm’s cost structure (Computer Sciences Corporation, 2002). Reducing procurement costs, therefore, has always been a high priority for all organizations. Many firms have turned to e-procurement—using the Internet and Web technologies to facilitate buyer-seller transactions. A well-designed e-procurement system provides benefits that go beyond cost savings. In a study of the experiences of North American and European firms and evaluations of 40 e-sourcing solution providers, the Aberdeen Group (Aberdeen Group, 2002) found that successful e-procurement adopters negotiated about an average of a 14.3 percent reduction in goods and services costs; cut sourcing cycles in half; reduced sourcing administrative costs by 60 percent; and shortened time-to-market cycles by 10 to 15 percent. Cecere and D’Aquila (2005) reported that the procurement and sourcing market grew by 14 percent to $2 billion in 2004. Sourcing business applications are expected to exhibit a stronger showing in 2005, when the market is projected to grow at 10 percent.

Cost reduction is obviously an important factor in favor of buyer-supplier coupling vis-à-vis e-procurement. However, several business trends are creating momentum toward the adoption of more efficient forms of procurement initiatives such as e-procurement. First businesses are increasingly outsourcing not only manufacturing but also other business processes as well. In a study of 162 manufacturing and service firms around the world, A.T. Kearney (2000) found that 52 percent of the firms planned to entrust most, if not all, of their engineering and design work to suppliers, while 40 percent planned to outsource manufacturing. Firms are continuing to shift away from highly vertically integrated models of production toward virtual partnering with suppliers and outside contracted manufacturers (Stephens, Inc., 2001). The transition to leaner operating models has resulted in suppliers or contracted manufacturers providing most of the “value” of original equipment manufacturers’ (OEM) products. Second many manufacturers may mandate the use of electronic procurement by its customers, as studies have shown that manufacturers’ savings accrue in proportion to the number of customers joining the e-procurement system (Raghunathan, 1999). Also large customer firms are more likely to require the use of some means of electronic procurement among their suppliers, especially so if these large firms intend to maintain relationships with just a few highly selected suppliers (Min & Galle, 1999). Bartels, Pohlmann, Ross, Martorelli, and Hudson (2005) reported that the number of firms outsourcing business processes related to the procurement of indirect materials or maintenance, repair, and operating (MRO) expense items to service providers has doubled from a year ago, even if the overall level of e-procurement adoption still remains low. This move appears to be a transitional solution to allow firms to cut costs on the purchasing of indirect goods as they sharpen their internal expertise in sourcing and purchasing direct goods.

Given these trends, it behooves procurement professionals of any sized firm to understand how procurement operates under different electronic environments into which one might find one’s firm inextricably and inevitably drawn. Moreover, they need to anticipate the very likely possibility of and plan ahead for participating in any one of these electronic procurement environments whether or not it is instigated by their own proactive choice.

The resource dependency theory (Pfeffer & Salancik, 1978; Ulrich & Barney, 1984) purports that organizations view the environment as the source of valued resources they need
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