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International supply relationships and non-financial performance—A comparison of U.S. and German practices

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Abstract

Despite the fact that the international trade of goods continues to steadily increase, international supply management for manufacturing still represents a largely under-researched topic. These omissions in the extant literature include a lack of focus upon the factors affecting the performance outcomes of international sourcing. This article examines the antecedents of the supply management performance of international buyer–supplier relationships. It does so from the perspective of the buying organization. The authors develop an integrative framework based on game theory and exchange theory, and linked with the resource dependence approach and transaction cost theory. Specifically, the relationships between four constructs are examined: the multi-dimensional construct of uncertainty, the game-theoretical construct of the shadow of the future, the exchange-theoretical construct of social bonding, and supply management performance. Based on large-scale surveys with supply managers, the framework is tested in a cross-national study in the U.S. and in Germany.

Keywords: Purchasing; Supply management; Structural equation modeling; Uncertainty

1. Introduction

In some industries over 60% of a firm's total cost of goods sold is controlled by the supply management function. Similarly, other important competitive parameters, such as the quality of the final product and the time to market for new products highly depend on how the supply management function coordinates relationships with external suppliers. While the importance of supply management in general has increased over the last decade, in many cases due to core-competency-with-outsourcing strategies (Quinn, 1999), international supply management has become particularly important as trade barriers have been removed, and information and communication technologies as well as logistics technologies have improved. For example imports in the U.S. accounted for 9.1% of the GDP in 1993; this figure rose to 11.3%

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in 1999 (Eurostat, 2001) and 13.8% in 2003 (Factbook, 2005). For Germany, the percentages were 17.5 in 1993 and 22.0 in 1999 (Eurostat, 2001) and 25.8% in 2003 (Factbook, 2005). Firm level data suggest a similar trend. A study by Monczka and Trent (1995) showed that 14% of U.S. manufacturing companies' purchasing volume is sourced internationally. The most recent study by the German sister organization of the Institute for Supply Management (ISM) found this percentage to be 23% (BME, 1998). These findings suggest that international supply management might have an important impact on a company's success.

The extant literature has examined international supply management from various perspectives. Conceptual articles have considered the elements that might constitute a global sourcing strategy and the types of strategy that will be useful under specific circumstances (e.g., Arnold, 1989; Fraering and Prasad, 1999; Humphreys et al., 1998; Monczka and Trent, 1991, 1992), including sourcing for foreign-based manufacturing (Meijboom and Vos, 1997). For example, Monczka and Trent (1992) developed a scoring model which helps supply managers rate various dimensions of their environment on 5 point scales. Depending on the overall score, a certain level or stage of international supply activities is appropriate. These same authors consider the potential evolution of organizations from a domestic-only purchasing stance through increasingly sophisticated levels of global sourcing (Trent and Monczka, 2002, 2003).

A second group of articles consists of empirical studies that have been carried out on the level of the overall system that is used for international sourcing processes. These studies look at general motives for sourcing internationally, such as lower cost, availability, value-added services, or better quality, and at elements of international supply management strategies, such as the number of international suppliers, the overall volume of international purchases, and the volume per region (e.g., Arnold et al., 1999; Giunipero and Monczka, 1990; Kaufmann and Carter, 2002; Monczka and Giunipero, 1984). Other phenomena that have been analyzed include organizational coordination (e.g., Davis et al., 1974), the level of information systems, and the capabilities of supply management personnel (Giunipero and Monczka, 1990; Min and Galle, 1991; Petersen et al., 2000). Nearly all of these studies have been descriptive.

A third set of studies has been carried out with a single international sourcing transaction as the research object (Hakansson and Wootz, 1975; Min and Galle, 1993; Spekman, 1991). The first generation of those studies examined the existence of country of origin stereotypes from the buyer's perspective (e.g., White, 1979). The second generation of studies dealing with single transactions mainly tested the applicability of the transaction cost framework as developed by Coase and Williamson (e.g., Kiedaisch, 1997; Spekman, 1991).

However, despite the multiple approaches used to examine international supply management, the following gaps remain: (a) while uncertainty is an important situational factor which influences the way in which international relationships are structured, it is not conceptualized as a multi-dimensional construct; (b) previous studies in general did not combine individual theories and test an integrative framework; (c) the extant literature has not investigated whether the prescriptions of the transaction cost framework lead to higher levels of relationship performance; and (d) cross-national studies of this subject are still rare.

1.1. Purpose

Based on the omissions in the extant literature, the goal of the present study is to examine the determinants of the non-financial performance of international buyer–supplier relationships. In doing so, the authors examine constructs relating the governance structures of these relationships and situational antecedents—specifically uncertainty in the environment of those international buyer–supplier relationships. A model is formulated which is grounded in game theory and in exchange theory. It is further eclectically linked with insights from the resource dependence approach and transaction cost theory. We follow the recommendation of Heide and Miner (1992) to move from studies that primarily examine individual theories to research that explores multiple theories, and thus, we examine both static structural theories and interactive models of relationship management.

We chose to test our framework in the U.S. and Germany for several reasons. Both countries share similarities along the lines of: (1) being developed economies, (2) with large manufacturing bases, and (3) with relatively large import volumes from foreign suppliers. These constant factors allow for the testing