

THE EFFECT OF SUPPLY CHAIN MANAGEMENT (SCM) TO COMPETITIVE ADVANTAGE AND ORGANIZATIONAL PERFORMANCE

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ABSTRACT

Supply chain management has become a potentially valuable way of securing competitive advantage and organizational performance, but among supply chains. This research conceptualizes and develops five dimensions of supply chain management and tests the relationships between supply chain management, competitive advantage, and organizational performance. Data for the study were collected from 151 organizations and the relationships proposed in the framework were tested using structural equation modeling. The results that higher levels of supply chain management can lead to enhanced competitive advantage and organizational performance. Conclusion that competitive advantage can have a direct, positive effect on organizational performance.

Keywords: scm; competitive advantage; organizational performance; sem

INTRODUCTION

As competition in the 2000s intensified and markets became global, so did the challenges associated with getting a product and service to the right place at the right time at the lowest cost. Organizations began to realize that it is not enough to improve efficiencies within an organization, but their whole supply chain has to be made competitive. The understanding and practicing of supply chain management has become an essential prerequisite for staying competitive in the global race and for enhancing profitably (Tan et al., 2002). The concept of supply chain management has received increasing attention from academicians, consultants, and business managers alike (Feldmann and Müller, 2003). Moreover many organizations have begun to recognize that supply chain management is the key to building sustainable competitive edge for their products and/or services in an increasingly crowded marketplace (Jones, 1998). According to Croom et al.(2000) that concept of supply chain management has been considered from different points of view in different bodies of literature [7], such as purchasing and supply management, logistics and transportation, operations management, marketing, organizational theory, and management information systems. Various theories have offered insights on specific aspects or perspectives of supply chain management, such as industrial organization and associated transaction cost analysis (Ellram,1999).

The concept of supply chain management has been involved from two separate paths: purchasing and supply management, and transportation and logistics management (Tan et al., 1998). According to purchasing and supply management perspective, Supply chain management is synonymous with the integration of supply base that evolved from the traditional purchasing and materials functions (Banfield, 1999). In the perspective of transportation and logistics management, Supply chain management is synonymous with integrated logistics systems, and hence focus on inventory reduction both within and across organizations in the supply chain (Alvarado and Kotzab, 2001).

LITERATURE REVIEW

Supply Chain Management

SCM have been defined as a set of activities undertaken in an organization to promote effective management of its supply chain. Donlon (1996) describes the latest evolution of supply chain management, which include supplier partnership, outsourcing, cycle time compression, continuous process flow, and information technology sharing. Tan et al. (1998) use purchasing, quality, and customer relations to represent supply chain management, in their empirical study. Alvarado and Kotzab (2001) include in their list of SCM practices concentration on core competencies, use of inter-organizational systems such as EDI, and elimination of excess inventory levels by postponing customization toward the end of the supply chain. Tan et al. (2001) identify six aspects of SCM practice through factor analysis: supply chain integration, information sharing, supply chain characteristics, customer service management, geographical proximity and JIT capability.

Chen and Paulraj (2004) use supplier base reduction, long-term relationship, communication, cross-functional teams and supplier involvement to measure buyer–supplier relationships. Min and Mentzer (2004) identify the concept supply chain management as including agreed vision and goals, information sharing, risk and award sharing, cooperation, process integration, long-term relationship and agreed supply chain leadership. Thus the literature portrays supply chain management from a variety of different perspectives with a common goal of ultimately improving organizational performance.

In reviewing and consolidating the literature, five distinctive dimensions, including strategic supplier partnership, customer relationship, level of information sharing, quality of information sharing and postponement, are selected for measuring supply chain management. The five constructs cover strategic supplier partnership and customer relationship sides of a supply chain, information flow across a supply chain as level of information sharing and quality of information sharing, and internal supply chain process. It should be pointed out that even though the above dimensions capture the major aspects of supply chain management, they cannot be considered complete.

The purpose of this research therefore to empirically test a framework identifying the relationships among supply chain management, competitive advantage and organizational performance. Supply chain management are defined as the set of activities undertaken by an organization to promote effective management of its supply chain. The supply chain management are proposed to be a multi-dimensional concept, including the downstream and upstream sides of the supply chain. Operational measures for the constructs are developed and tested empirically, using data collected from respondents to a survey questionnaire.

SEM is used to test the hypothesized relationships. It is expected that the current research, by addressing supply chain management simultaneously from both upstream and downstream sides of a supply chain, will help researchers better understand the scope and the activities associated with supply chain management and allow researchers to test the antecedences and consequences of SCM practice. Further, by offering a validated instrument to measure supply chain management, and by providing empirical evidence of the impact of supply chain management

on an organization's competitive advantage and its performance, it is expected that this research will offer useful guidance for measuring and implementing supply chain management in an organization and facilitate further research in this area.

Competitive Advantage

Competitive advantage is the extent to which an organization is able to create a defensible position over its competitors (Porter,1985). It comprises capabilities that allow an organization to differentiate itself from its competitors and is an outcome of critical management decisions (Tracey, et al., 1999). The empirical literature has been quite consistent in identifying price/cost, quality, delivery, and flexibility as important competitive capabilities (Skinner, 1985). In addition, recent studies have included time-based competition as an important competitive priority. Research by Vesey (1991), Handfield and Pannesi (1995), Kessler and Chakrabarti (1996), describe a research framework for competitive capabilities and define the following five dimensions: competitive pricing, premium pricing, value-to-customer quality, dependable delivery, and production innovation. These dimensions are also described by Cleveland et al.(1989). Based on the above, the dimensions of the competitive advantage constructs used in this study are price/cost, quality, delivery dependability, product innovation, and time to market.

Organizational Performance

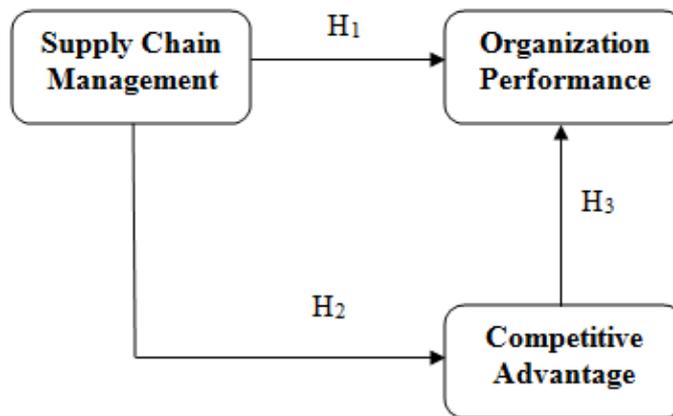
Organizational performance refers to how well an organization achieves its market-oriented goals as well as its financial goals (Yamin et al.,1999). The short-term objectives of SCM are primarily to increase productivity and reduce inventory and cycle time, while long-term objectives are to increase market share and profits for all members of the supply chain (Tan et al.,1998). Financial metrics have served as a tool for comparing organizations and evaluating an organization's behavior over time Holmberg (1999). A number of prior studies have measured organizational performance using both financial and market criteria, including return on investment, market share, profit margin on sales, the growth of return on investment, the growth of sales, the growth of market share, and overall competitive position (Zhang,2001). In line with the above literature, the same items will be adopted to measure organizational performance in this study.

RESEARCH METHODS

Instrument development methods for supply chain management include four phases: (1) item generation, (2) pre-pilot study, (3) pilot study, and (4) large-scale data analysis. Instruments that measure competitive advantage and organizational performance were adopted from Zhang (2001). In phase four, rigorous statistical analysis was used to determine the validity and reliability of the supply chain management, competitive advantage, and organizational performance instruments.

Research Framework

The supply chain management framework developed in this research. The framework proposes that supply chain management will have an impact on organizational performance both directly and also indirectly through competitive advantage. Supply chain management is conceptualized as a five-dimensional construct. The five dimensions are strategic supplier partnership, customer relationship, level of information sharing, quality of information sharing, and postponement. A detailed description of the development of the supply chain management construct is provided in the following paragraphs.



RESULT AND DISCUSSION

Table 1. Path Coefficient Analysis

Hypothesis	Path Coefficient	T-Statistic	Remarks
Supply Chain Management → Competitive Advantage	0.6562	8.2183	Positive and Significant
Supply Chain Management → Organization Performance	0.1246	2.7782	Positive and Significant
Competitive Advantage → Organization Performance	0.0657	12.5667	Positive and Significant

CONCLUSION

This research provides empirical justification for a framework that identifies five key dimensions of supply chain management and describes the relationship among supply chain management, competitive advantage, and organizational performance. It examines three research questions:

1. Organizations with high level of supply chain management have high levels of organizational performance.
2. Organizations with high levels of supply chain management have high levels of competitive advantage.
3. Organizations with high levels of competitive advantage have a high level of organizational performance. For the supply chain management was developed. The instrument was tested using rigorous statistical tests including convergent validity, discriminates validity, reliability, and the validation of second-order constructs. This study or research provides empirical evidence to support conceptual and prescriptive statements in the literature regarding the impact of supply chain management.

Research Implications and Limitations

The present research validates the supply chain management construct that has generally been poorly defined and about whose meaning there has been a high degree of variability in people’s understanding. Although some organizations have realized the importance of implementing supply chain management, they often do not know exactly what to implement, due to a lack of understanding of what constitutes a comprehensive set of supply chain management. By

proposing, developing, and validating a multi-dimensional, operational measure of the construct of supply chain management, and by demonstrating its efficacy in enhancing organizational performance and competitive advantage, the present study provides supply chain management managers with a useful tool for evaluating the comprehensiveness of their current supply chain management. We have shown that supply chain management forms a second-order construct composed of the first-order constructs of strategic supplier partnership, customer relationship, level of information sharing, quality of information sharing, and postponement—the five major components of supply chain management. Through the analysis of the relationship of supply chain management construct with competitive advantage, it was demonstrated that supply chain management may directly impact competitive advantage. The findings of this research thus point to the importance of supply chain management to the organization. As today's competition is moving from “among organizations” to “between supply chains”, more and more organizations are increasingly adopting supply chain management in the hope of reducing supply chain costs and securing competitive advantage. The findings of this research support the view that supply chain management can have discernible impact on competitive advantage and organizational performance.

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