



Defining the concept of supply chain quality management and its relevance to academic and industrial practice

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Abstract

Even though much attention has been focused on supply chain management (SCM) concepts in recent years, its interlinking with the quality management perspective is often limited and tangential in nature. While the importance of quality management is universally recognized, academic researchers need a more focused approach in evaluating quality management issues within the internal and external supply chain contexts. Consequently, in this study we define the concept of supply chain quality management (SCQM), and evaluate its relevance in academic and industrial practice by comprehensively reviewing prior quality and SCM literature in major journals and inductively identifying the themes that emerge within it. In particular, we take a more critical look at those published studies that specifically lie at the interface of quality and external SCM, and argue that quality practices must advance from traditional firm centric and product-based mindsets to an inter-organizational supply chain orientation involving customers, suppliers, and other partners. We also show that SCQM across inter-organizational supply chains has received scant research attention, even though that perspective is sorely needed in delivering value to customers in often globally scattered supply chains. A case study of a firm that is a first-tier supplier in an offshoot of automotive supply chain is presented to better illustrate the SCQM themes and their treatment in industrial practice. Based on our research, the case study, and experience of working with firms in the domain of quality management and the ISO 9001 certification processes, we propose a Quality-SCM framework that can be used to place prior work in perspective, as well as identify three specific opportunities for future SCQM research.

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1. Introduction

In the struggle for marketplace advantage, organizations, consultants, practitioners and academics have attempted to organize and integrate

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supply chain management (SCM) concepts and practices into their business processes. As a result, many discovered that this subject is neither well defined nor easily implemented, but encompasses an enormous breadth of topics requiring radical new thinking. Moreover, SCM involves challenges such as developing trust and collaboration among supply chain partners, identifying best practices that can facilitate supply chain process alignment and integration, and successfully implementing the latest collaborative information systems and Internet technologies that drive efficiencies, performance, and quality throughout the supply chain.

Much like the recent emergence of SCM initiatives, the topic of quality management and improvement has dominated most manufacturing and service organizations since the early 1970s. During this era, foreign competition challenged the ingrained beliefs of organizations whose quality programs consisted primarily of traditional intra-organizational tools and strategies that resulted in limited success. Deming (1986) cited several “diseases and obstacles” for the inability of organizations to compete globally during this period, including the lack of constancy of purpose, performance measurement and evaluation, emphasis on short-term profits, and lack of management support. Garvin (1983) conducted a study comparing practices in US and Japanese firms and concluded “superior levels of performance come not from national traits or cultural advantages, but from sound management practices deliberately and systematically applied.” Although much has been written about the successful total quality resurrection in the 1980s of companies such as Harley–Davidson motorcycles (Reid, 1989) and Xerox (Howard, 1992), empirical studies that have investigated the process of total quality management (TQM) or quality initiatives on operational performance have produced mixed results (Kaynak, 2003; Samson and Terziovski, 1999). Kaynak (2003) commented that research design may be the culprit for the inconsistency of results, but a fundamental review of the varying definitions of quality and the “broad assortment of analytical tools and quality issues” from well-known quality gurus such as Crosby, Deming, Feigenbaum,

Ishikawa, Juran, Shewhart and Taguchi (Hoyer and Hoyer, 2001) may have also contributed to the varied success of early organizational attempts to establish and launch quality programs. Garvin (1984) further supported this multifaceted concept of quality by identifying five major approaches to defining the ideal meaning of quality (e.g. transcendent, product-based, user-based, manufacturing-based and value-based) that generate perceptual differences and attitudes among managers, functional departments, academics, and even customers. It is simple to recognize from Garvin’s analysis how organizations that strive to compete on the quality playing field may pursue quality initiatives that fail to show real results and sustain competitiveness in the global market, simply because they fail to communicate precisely what they mean by the term “quality.” Moreover, the relevance of the impact of the quality movement in the international marketplace for the last 30 years is well established and documented by the loss of manufacturing jobs to those competitors who successfully understand and translate customer requirements to final products and services. Malhotra et al. (1994) conducted a survey of American manufacturing Vice Presidents and reported that quality management was a key strategic issue facing most manufacturing companies in the 1990s.

In the past decade however, companies have begun to recognize not only the need for continual quality improvement and meeting the needs of their immediate customers, but also the necessity of competing quickly and efficiently in ever-changing global markets. As a result, SCM has come to the forefront as a philosophy by which firms can operate inter-organizationally, and merge both strategic initiatives and upstream and downstream processes in order to achieve business excellence. Traditional quality programs focusing on approaches such as TQM, the Malcolm Baldrige National Quality Award (MBNQA) and ISO 9001 (international quality management system standard), must now transform to a supply chain perspective in order to simultaneously make use of supply chain partner relationships and quality improvement gains essential to marketplace satisfaction.

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