

Chapter 101

Future Trends in SCM

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ABSTRACT

The field of supply chain management (SCM) has experienced radical changes in its short life period. Originating from 1980 and 1990s management trends and techniques of operations management, passing process oriented and system oriented approaches in the 1990s, and now attracting the attention to behavioral approaches have all caused SCM to be largely vertiginous. So dealing with its future requires a more accurate method than common predictor fashions. Therefore, the chapter first considers SCM as a body of knowledge in which evolution is based on its theoretical foundation, and therefore, prevalent research paradigm(s), research methodological base(s) used by developers, and also real world challenges that motivate it. Consequently, the authors review current status of SCM from standpoint of the discipline's theory, its conceptualization process, and most used research methods and approaches. Then the authors will be able to use its implications to adopt an appropriate model of philosophy of knowledge for scientific change and knowledge growth of SCM. This can be used as a guide to the future of supply chain management.

AN EVOLVING CONCEPT

Supply chain Management's definition is seriously contentious. Kathawala et.al, (2003) indicates that supply chain management is defined poorly and its meaning has a high volume of variability in the minds. Also definitions provided in literature (such as New, 1997; Mentzer et al., 2001; Kauff-

man, 2002) shows little consensus on the definition of supply chain management. Burgess et al., 2006 have reviewed the literature of supply chain management from the standpoint of its prevalent definition status to evaluate the maturity level of the field. Their review reveals that almost 20 percent of researches use existing definitions, 15 percent develops their own definition and in half of them no definition is used. More concentration

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shows even existing definitions which is used in some research have little consistency and there is no specifically accepted definition. Besides this considering that 10 percent of researches incrementally changes existing definition can tell us the definition of supply chain management is still open and challenging.

To realize the researchers and practitioners understanding about the concept we can investigate framing of supply chain management in their works. Its large bearing on the qualities of the way it conceptualizes will make the future trends more clear. Burgess et al. represents four categories in which Supply chain Management is conceptually framed. These four categories; “activity” category (described as a function of a process), “process” category (described as a chain of associated activities), “system” category (described as a chain of associated processes) and “other” category (described as kind of analysis which deal with, interdisciplinary, behavioral, sociological, psychological and philosophical aspects); describes four ways with which the researchers and practitioners deal supply chain management. For example assuming supply chain management an activity makes it something minor which can be treated as an operational function. On the other hand perceiving it as a process makes or prospective wider and understanding it as a system represents supply chain management as an all-embracing management framework. At last describing supply chain management considering its behavioral aspects leads to a holistic point of view. Investigating the conceptual framing which is used by researchers and organizations reveals the current construct of supply chain management and help us to understand its evolving trend. Burgess et al. show the majority of more than half of researches viewed supply chain management as some form of process. More than 20 percent framed it as a system and less than a tenth saw it as a simple activity.

Also presenting the conceptualization of supply chain management successfully depends on the construct with which we logically group supply

chain management as a management concept. Constructs are about the higher order absolute immeasurable variables, but give us a clearer definition of the concepts (Nunnally, 1978, cited in Burgess et al 2006). The set of generally accepted constructs doesn't appear to exist. In regard to the commonalities between the proposed sets of constructs for supply chain management by several researchers such as Chen et al (2004), Min et al (2001) and Tracey et al. (2004), Burgess et al conclude a set of seven constructs. This set includes “leadership” (in regard to strategic aspects of supply chain management; (see Shapiro, 2004)), “inter organizational relationships”, (concentrating on the connections within the organizations), “intra organizational relationships” (concentrating on the connections between the organizations, based on joint social and economic responsibilities and interests) “logistics” (focusing on the issues which address material handling in a supply chain), “process improvement orientation” (in regard to continuous improvement of processes within a supply chain), “information system” (focusing on systems which facilitate communications within a supply chain) and “business results and outcomes” (concentrating on the economic benefits and outcomes of adopting an appropriate supply chain management aims). As other discipline within management field constructs of supply chain management can be divided to two general categories of “soft” and “hard” constructs. Soft constructs deal with behavioral and social issues of the field and hard constructs are about infrastructural and technological aspects of the field. Therefore the first three construct can be categorized as the soft ones and the others can be categorized as the hard ones.

Based on the researches done on the constructs of supply chain management and these categories by Burgess et al, even in soft construct which is expected to be concentrated on people related and behavioral issues, the research have been on technical aspects. Most of research in soft constructs is carrying on about inter-organizational relationships and almost two thirds of the research in hard con-

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