

Chapter 2

Knowledge Sharing in Supply Chain

Liandong Zhu

University of Vaasa, Finland

Robertus Wahyu Nayan Nugroho

Technical University of Liberec, Czech Republic

Mian M. Ajmal

Abu Dhabi University, UAE

Yohanes Kristianto

University of Vaasa, Finland

ABSTRACT

This chapter introduces the thermodynamics analogy as a means of studying knowledge sharing in supply chain. The study finds that distance and the knowledge capacity of the supplier are important to reduce knowledge sharing uncertainty. Furthermore, higher contact frequency between the supplier and the buyer without considering supplier capacity is proven to be insignificant to reduce knowledge sharing uncertainty. For intellectuals, the mechanism provides a new approach to explicate knowledge sharing in supply networks. Besides, it provides deep-rooted opening point for supplementary empirical assessment. The mechanism facilitates managers to expand their understanding of composite circumstances embedded into global supply networks to share their knowledge. With that enhanced understanding, the managers can spotlight their actions, which help further to perk up their firms' competitiveness provoked by the knowledge sharing activities.

INTRODUCTION

In recent years, scholars have paid escalating concentration to the role of knowledge in gaining competitive advantage leading to the emergence and development of the knowledge-based view of

organizations (Eisenhardt and Santos, 2002). The debate on knowledge sharing arises from a growing recognition of the importance of knowledge in the 'new knowledge economy' and its impact on organizational competitiveness. Since, the role of knowledge becomes more important in knowledge based organization where it competes

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based on knowledge intensive products/services rapidly (Chase, 1997). Recently, an increasing number of organizations are entering into relationships with other organizations to create value through continuous knowledge management (Hagedoorn, 1993; Robertson and Yu, 2001). Such inter-organizational knowledge management has been proposed as a fundamental strategic process and an important means by which organizations may achieve sustainable competitive advantage in the future (Contractor and Lorange, 2002; Podolny and Page, 1998; Powell and Brantley, 1992; Powell et al., 1996). However, in broader perspective of inter-organization, the complexity of knowledge becomes larger. It encourages codifiable and explicable knowledge by developing common language and ontology (Chen et al., 2000). The definition of ontology used here is that it consists of a representational vocabulary with precise definitions of the meanings of the terms of this vocabulary plus a set of formal axioms that constrain interpretation and well-formed use of these terms. Ontology use here then is analogous to use of business forms with standard operating procedures, since informational structure is represented as terminology (Kim, 2002).

A difficulty of knowledge ontology development is that some of valuable knowledge is stored in individuals that many of them are fuzzy and not possible to formalize (Polanyi, 1966). Indeed, knowledge sharing is important in inter-firms relationship since it is as social capital that support business agility and has been somewhat neglected in previous studies (Howells, 2002; Madhavan and Grover, 1998). With the result that supply chains more concentrated to maximize the benefit of information sharing by creating business architecture (Meyr et al., 2002; Disney, 2003).

In global and agile supply chains, furthermore, knowledge sharing is very important to create flexible manufacturing and product development. Effective sharing of knowledge enables supply chains for reducing time to market and developing process modularity. Communication amongst

engineers in supply chains reduces product development time and enables them to develop modular manufacturing process by sharing their product interface development. This interface development will reduce incoming material inspection time and make participants more freely to maximize their innovations. Therefore, our research question is “How to maximize knowledge sharing benefits in supply chain networks?”

Paper is developed as follow; Section 2 reviews some literature from knowledge sharing in supply chain perspective to give insight to readers about the challenges for knowledge sharing in supply chain. Section 3 describes the critical success factors of knowledge sharing by considering the previous challenges. Then Section 4 discussed the managerial implications for the proposed methodology. Finally, section 5 makes conclusion and discussion of how knowledge sharing must be applied in terms of global supply chains networks.

KNOWLEDGE SHARING IN SUPPLY CHAIN

Knowledge is recognized to be a ‘justified true belief’ (Nonaka, 1994). Knowledge sharing between individuals is the process by which knowledge held by an individual is converted into a form that can be understood, absorbed, and used by other individuals (Ipe, 2003). Still if the perspective in this article is on the supply chain setting, we believe that the collaborative nature of these exchange relations stresses interpersonal collaboration and sharing of knowledge. Knowledge sharing is also vital because it provides a link between the individual and the organization by moving knowledge that resides with individuals to the organizational level, where it is converted into economic and competitive value for the organization (Hendriks, 1999). Network forms of organizing economic activities have rapidly increased in number since 1990. Globalisation, increased technological complexity and the re-

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