

Chapter 94

Modeling the Metrics of Individual, Organizational and Technological Knowledge Sharing Barriers: An Analytical Network Process Approach

B. P. Sharma

Motilal Nehru National Institute of Technology, India

M. D. Singh

Motilal Nehru National Institute of Technology, India

ABSTRACT

In today's knowledge-based business, knowledge is the only source of competitive advantage for engineering industries. Knowledge sharing plays an important role in the success of knowledge management (KM). Knowledge sharing barriers (KSBs) become obstacles for KM to achieve the goals of the industries. In this paper, three categories of KSBs have been identified such as individual, organizational and technological. The main purpose of this research is to measure the effectiveness of individual, organizational and technological KSBs by the application of an analytical network process (ANP) framework which helps to the managers for taking decision to enhance the successful knowledge sharing in the engineering industries. An ANP framework has been developed with the help of identified determinants, dimensions and enablers to evaluate alternatives such as individual, organizational and technological KSBs. Results indicate that the organizational KSBs have the maximum effect on knowledge sharing followed by technological and individual KSBs.

DOI: 10.4018/978-1-4666-9562-7.ch094

INTRODUCTION

In a knowledge-driven economy, knowledge is considered as the economic resource and the only source of competitive advantage for an engineering industry (Singh & Kant, 2009). Knowledge sharing is the key of successful KM (Singh & Kant, 2008b). Riege (2005) has stated that the identification and recognition of KSBs plays an important role in the success of KM strategy. Knowledge sharing practices often seem to fail because industries try to fit KM strategy and knowledge sharing practices in their existing culture. Nonaka and Konno (1998) have expressed that knowledge is possessed by individuals and the transfer of individual's knowledge into organizational knowledge depends upon the employee's knowledge sharing attitude. At present, knowledge sharing is very crucial for an engineering industry but still individuals do not share their knowledge because they are aware of their value. (Davenport, 1995). Knowledge sharing can help the individuals to remain valuable in the engineering industries. Gibbert and Krause (2002) have argued that knowledge workers cannot be enforced to share their knowledge but can be motivated to share. Ruggles (1998) has said that motivational methods to encourage knowledge sharing attitude but changing the attitude of individuals is one of the biggest challenges for the success of knowledge sharing and KM strategy. Hence, it is important to know about barriers which hinder the knowledge sharing because it is not easy to translate the individual's tacit knowledge (resides in the human mind) into organizational knowledge.

The identification and recognition of KSBs provide guidelines to the senior managers to audit existing knowledge sharing practices to identify bottle-necks and improving the overall effectiveness of knowledge sharing activities (Riege, 2005). Individual KSBs are originating from individual behavior or employee's perceptions and actions. At an individual level, KSBs include internal re-

sistance, lack of trust, lack of motivation and a gap in awareness and knowledge. The organizational knowledge sharing is the key factor for success of KM strategy which depends upon the corporate culture (Singh et al., 2006). At an organizational level, KSBs consist of poor leadership, internal and external competitiveness, existing organizational culture and resources. Finally, Singh and Kant (2008a) have explained that technology is an important enabler for successful knowledge sharing in engineering industries. At technological level, KSBs consist of lack of integration of technology, reluctance to use of IT systems and lack of training.

At present, the knowledge sharing objectives and strategies are not incorporated in the business strategy of the engineering industries due to lacking in metrics and identification of KSBs. Thus, it is necessary to identify and measure the effectiveness of KSBs. KSBs are categorized in to three domains such as individual, organizational and technological due to their equal effect on knowledge sharing in the engineering industries. In Table 1, the comparison among individual, organizational and technological KSBs has been done as per identified attributes.

In this paper, a framework is presented for modeling the effect of individual, organizational and technological KSBs on the basis of interdependent variables. The framework supports to the top management in analyzing the variables effecting decision making, flexibility, innovation and competitiveness. Using an ANP approach in knowledge sharing context, an influence of various dimensions of KSBs can be evaluated. It also explicitly considers the influence of determinants on one another. All identified dimensions and determinants of KSBs have been integrated in a model due to their systematic characteristics as shown in Figure 1. These systematic relationships represent the true linkages and interdependencies of various determinants (Saaty, 1996).

13 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

www.igi-global.com/chapter/modeling-the-metrics-of-individual-organizational-and-technological-knowledge-sharing-barriers/142708

Related Content

Personality Antecedents of EWOM in Determining Online Customer Purchase Behavior

Vijayabanu C., Karthikeyan S. and Gayathri R. (2023). *International Journal of Business Analytics* (pp. 1-13).

www.irma-international.org/article/personality-antecedents-of-ewom-in-determining-online-customer-purchase-behavior/316867

The Pollyanna Problem: Assignment of Participants in a Gift Exchange

Virginia M. Miori (2014). *International Journal of Business Intelligence Research* (pp. 1-12).

www.irma-international.org/article/the-pollyanna-problem/108009

Performance Management through Societal Performance Indicators

Joe White (2013). *Principles and Applications of Business Intelligence Research* (pp. 125-138).

www.irma-international.org/chapter/performance-management-through-societal-performance/72566

Business Intelligence is No 'Free Lunch': What We Already Know About Cost Allocation – and What We Should Find Out

Johannes Eppe, Robert Winter, Stefan Bischoff and Stephan Aier (2018). *International Journal of Business Intelligence Research* (pp. 1-15).

www.irma-international.org/article/business-intelligence-is-no-free-lunch/203654

Generational Cohorts' Reactions: Analyzing the Impact of Brand Authenticity on Consumer Behaviour

Simonetta Pattuglia and Sara Amoroso (2023). *International Journal of Business Analytics* (pp. 1-15).

www.irma-international.org/article/generational-cohorts-reactions/318668