

## Chapter 2.20

# Contributing Knowledge to Knowledge Repositories: Dual Role of Inducement and Opportunity Factors

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### ABSTRACT

Knowledge Management Systems (KMS) such as electronic knowledge repositories (EKR) have brought substantial changes to the way organizations leverage their knowledge resources. Despite the importance of KMS, organizations are faced with a challenge to realize the benefits of KMS. One challenging issue that has not been extensively investigated by prior KMS studies is the factors that drive employees' usage of KMS and their willingness to contribute knowledge. This chapter posits that the drivers of KMS usage can be defined by two facets: (1) the inducement mechanism that motivates the employees to contribute knowledge and (2) the opportunity mechanism that facilitates their knowledge contribution. To examine the determinants of KMS usage, we propose a multi-dimensional model that forms three antecedents of inducement – rewards, power, and centrality – and three antecedents of opportunity – ease

in using EKR, organizational structure and top management support. The model is tested using 180 survey responses collected from a software company. The analysis demonstrates that KMS usage is jointly determined by both the inducement and opportunity mechanisms.

### INTRODUCTION

The axial principle of knowledge management theory is that organizations are social formations that control a significant amount of knowledge and possess the capability to develop, share, and transform knowledge into competitive advantage (Grant & Barden-Fuller, 2004; Stewart, 1997). Knowledge pervades all spheres of an organization. It is located in the minds of co-workers, embodied in routines, and stored in databases and other devices. An important concept that

integrates knowledge from all these spheres is the notion of knowledge sharing. Knowledge sharing is about disseminating, transferring, diffusing, and distributing knowledge within and between organizations. When organizations are viewed as repositories of knowledge, the greatest managerial challenge is to promote knowledge sharing within an organization.

Information technologies support knowledge sharing in sundry ways. Organizations use technologies such as knowledge management systems (KMS) for capturing and distributing knowledge. KMS are nothing but a class of information systems applied to knowledge storage and retrieval and knowledge sharing (Alavi & Leidner, 2001). Two most common models of knowledge management systems that emerged in the information systems literature are the repository model and the network model (Alavi, 2000). To address the issues of knowledge sharing in an organization, the repository model underscores the principles of codification and storage of knowledge, whereas the network model emphasizes the connectivity among knowledge workers.

Electronic Knowledge Repositories (EKR) are KMS that have been classified as a repository model (Kankanhalli, Bernard & Wei, 2005). The potential benefits of these repositories include time and cost savings, which are realized by leveraging existing knowledge rather than creating new knowledge. However, the mere presence of knowledge repositories does not guarantee successful knowledge management (Kankanhalli et al., 2005). Success of a firm's knowledge management initiatives, such as maintaining and taking advantage of EKR, depends on the employees' active participation in using these systems to share knowledge. To enhance our understanding of how EKR facilitate knowledge sharing, we believe that it is important to examine the mechanisms that influence employees' usage of EKR to share their knowledge.

Building on the work by Argote, McEvily, and Reagans (2003), we identify *inducement*

and *opportunity* as two important mechanisms of knowledge management that are essential for promoting knowledge sharing among employees (Argote et al., 2003). However, prior studies on the usage of repositories by knowledge contributors have mainly investigated the independent effects of inducement and opportunity factors on knowledge-sharing behavior (Bock, Zmud & Kim, 2005; Ruppel & Harrington, 2001; Taylor, 2004). As far as we know, none of the studies on knowledge management systems have explored the joint influences of both *inducement* and *opportunity* factors. In this research, we propose an *inducement-opportunity* framework that recognizes the duality of knowledge management mechanisms, which have an interaction effect on the employees' usage of EKR. Specifically, the framework addresses three main questions: (1) What are the inducement factors that drive the employees to contribute knowledge to EKR? (2) What are the opportunity factors that facilitate knowledge contribution? (3) What is the combined influence of inducement and opportunity mechanisms in enhancing the usage of EKR by knowledge contributors? This study contributes to the knowledge management literature by developing a multi-dimensional model that examines the antecedents of inducement and opportunity mechanisms and the effects of these mechanisms on employees' usage of EKR.

Using the recommendations extended by the knowledge management, social exchange, and information technology (IT) usage literature, we identify three antecedents of inducement, namely, *rewards*, *power*, and *centrality*, and three antecedents of opportunity, which are, *ease in using EKR*, *top management support*, and *organizational structure*. The research model is tested using survey data collected from 180 software engineers. The overall results support the significance of all the aforementioned factors, as well as the combined influence of inducement and opportunity in explaining EKR usage.

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