A Study on Job Performance in the Context of Rich Use of Kms: A Systematic Literature Review

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Abstract: The key purposes of this study were to identify the impact of knowledge management practices e.g. Knowledge acquisition, knowledge conversion, knowledge application and knowledge protection on organizational performance. On top of that this study mainly focus on how the rich use of knowledge management systems impact on job performance by adopting the context theorizing approach. We found that employees' performance was affected by the extent to which they engage in rich use of a KMS and the use–performance relationship was dependent on task nonroutineness, absorptive capacity, and transformational leadership, perceived support for contextualization and personal and cultural values. This work thus contributes to the KMS literature by developing a better understanding of the relationship between KMS use and job performance as well as providing guidance to organizations and employees on how to enhance employees' job performance through effective use of KMSs.

Keywords: Knowledge Management System, Rich use of KMS, Job Performance.

I. INTRODUCTION

Knowledge management system (KMS), that is, "a class of information systems applied to managing organizational knowledge" (Alavi and Leidner 2001, p. 114), It's facilitates knowledge sharing and transfer among employees, KMS represents a type of social technology. KMS implementations are expected to bring in numerous benefits such as driving economic growth, facilitating social development, reducing cost of employee training, and enhancing job performance (Gallivan et al. 2003; He and Wei 2006).

In the context of a KMS implementation, this work adopts a rich use perspective to conceptualize KMS use that examines *cognitive absorption* (i.e., the extent to which employees are in a state of deep attention and engagement with the system; e.g., Agarwal and Karahanna 2000), and *Deep structure use* (i.e., the extent to which the right features of the system are used to support relevant tasks; e.g., Burton-Jones and Straub 2006)

In recent years many organizations are now attempting to provide an internal and external environment for adopting a KMS to ensure their existing knowledge is properly managed and capitalized upon. This work expected to make contribution on the body of IS research related to KMS implementations by adopting the context theorizing approach to develop a better understanding of employee job performance in the context of KMS use.

II. UNDERSTANDING THE BASIC TERMS

Rich use of KMS

There are different conceptualizations of technology use that can be categorized into two types (i) *Lean use*: Lean use considers the technology being investigated as a whole and captures technology use in terms of duration, frequency, or intensity

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(e.g., Venkatesh 2000; Venkatesh et al. 2008), (ii) *Rich Use:* The conceptualization of rich use refers to cognitive absorption and deep structure use.

Cognitive absorption describes the interaction between a user and a technology; here a KMS (see Agarwal and Karahanna 2000; Burton-Jones and Straub 2006).It has five dimensions: temporal dissociation, focused immersion, heightened enjoyment, control, and curiosity (Agarwal and Karahanna 2000). Based on Agarwal and Karahanna (2000), when users interact with a system (here, a KMS) (i)) They feel that they can manage the interaction (control);(ii) They have a strong sense of inquisitiveness (curiosity);(iii) They feel great pleasure in using it (heightened enjoyment);(iv) They occupy themselves totally with it (focused immersion); and (v) They may not realized how much time they have spent on it (temporal dissociation).The concept of cognitive absorption is rooted in the theory of flow that aims to understand optimal experience, a state when people feel in control of their actions, as a master of their own fate, a sense of exhilaration and a deep sense of enjoyment (Csikszentmihalyi 1990).

When people enter a state of cognitive absorption, they also become more sensitive to and more curious about things on which they focus (Trevino and Webster 1992). Such sensitivity and curiosity will drive them to seek answers to various issues in which they are interested or about which they are uncertain, such as getting to know the pros and cons of different features of a system. In a state of optimal experience, people voluntarily stretch their bodies and minds to their limits to accomplish something challenging (Csikszentmihalyi 1990).

Moreover, cognitive absorption is a situational intrinsic motivator (Agarwal and Karahanna 2000), an important driver of performance (Vallerand 1997). Mitchell (1997) found that the strength of motivation was strongly related to performance. To summarize, if users are cognitively absorbed with using a KMS to accomplish their jobs, they will be likely to perform their work more efficiently and effectively, resulting in better job performance.

Deep structure use is the extent to which system features pertinent to the task have been deployed with respect to the breadth of use (i.e., number of features used) and depth of use (i.e., use the right features for the core aspects of the tasks).

Although employees may not need to learn all the features, it is important to develop proficiency in using certain features that are relevant and critical to get their jobs done. Such features should capture the core aspects of the job tasks, defined as the critical components of the job tasks or the critical paths that determine whether the job tasks can be successfully completed (e.g., Davis and Heidorn 1971). The core aspects of job tasks are likely to vary depending on the nature of task and job. Deep structure use describes use of the system at the feature level (Burton-Jones and Straub 2006). When employees engage in deep structure use, they are likely to get familiar with different features and leverage the features more effectively (Jasperson et al. 2005).

Although the prior KMS literature has mainly taken a lean use perspective to understand the relationship between use and performance, in this study it is argued that a rich use perspective is more appropriate in the context of a KMS implementation for two reasons. First, a key purpose of a KMS is to facilitate the processes of knowledge storage, retrieval, sharing, and application, and such processes require users to learn a large and complex system (Alavi and Leidner 2001).

If users pay more attention when using a system, they are likely to develop a better understanding of the system that may help them better leverage the system to complete job tasks. Therefore, it is important to capture users' level of involvement with a KMS when conceptualizing KMS use.

Given that cognitive absorption captures not only frequency of use, but also degree of attention, it adequately represents users' level of involvement with a KMS. Second, Lean use considers the technology as a whole and we do not know which features or functions of the technology will contribute positively to job performance.

Most of the large-scale systems, such as a KMS, come with numerous functions and features. Given that the conceptualization of breadth of use and depth of use underscores the specific features of the system that are closely related to job task completion, the use–performance link will be better explained by a rich conceptualization of use than by a lean conceptualization of use (see Burton-Jones and Straub 2006).

An employee's job performance is defined as his or her overall job effectiveness (e.g., Griffin et al. 2007). It indicates whether an employee performs his or her job well. An employee's job performance can be obtained using either objective performance data (e.g., sales volume) or assessed by the employee's supervisors, peer coworkers or employees themselves (Rothbard and Wilk 2011; Sykes 2015; Sykes et al. 2014; Tepper et al. 2011).

The distinction between task performance and job performance lies in that task performance represents only one aspect of job performance. Task performance focuses on employees' behaviors of executing the organization's technical processes or maintaining the organization's technical requirements (e.g., Dalal et al. 2009; Motowidlo and Van Scotter 1994), whereas job performance comprises the quality of work on broader dimensions, including not only technical processes (i.e., task performance), but also other activities that support the organizational, social, and psychological environment in which the technical core must function (e.g., Griffin et al. 2007; Motowidlo and Van Scotter 1994). The antecedents of task performance may not be the same as those of other aspects of job performance. For example, experience was found to have a stronger correlation with task performance than do other aspects of job performance, whereas personality traits, such as conscientiousness, were found to affect other aspects of job performance more strongly than they do task performance (e.g., Chiaburu et al. 2011).

This paper argues that rich use of a KMS positively affects job performance and the five contingency factors moderate this relationship.

III. TRANSFORMATION LEADERSHIP

It is important for organizations to provide effective leadership during a KMS implementation. This work shows business unit leaders play a key role in affecting employees' job performance. Specifically, transformational leaders were effective in helping their employees to better leverage a KMS to enhance job performance. Managers should consider behaving in ways that exhibit transformational leadership actions. Organizations should also consider planning ahead to construct an effective management team before a KMS implementation. They should consider hiring leaders from either internal or external sources with transformational leadership skills to manage implementations. Organizations can also provide training for leaders to develop transformational leadership skills. (Xiaojun Zhang 2017)

Given that transformational leaders inspire and motivate employees to engage in beyond-routine work behaviors, it is possible to theorize the direct effect of transformational leadership on rich use of KMS that represents such behavior as beyond simple and routine use of the system. Consistent with prior research (e.g., Dvir et al. 2002), it is also possible to theorize the direct effect on transformational leadership on job performance.

IV. ABSORPTIVE CAPACITY

Absorptive capacity is defined as an employee's ability to learn new knowledge and harness the knowledge (e.g., Brown 2005; Zhang et al. 2011). Absorptive capacity was originally used to describe a firm's ability to recognize the value of external knowledge, convert it to its own context, and then apply such knowledge to gain competitive advantage (Cohen and Levinthal 1990). Given that a firm's absorptive capacity depends on the absorptive capacity of its individual members (Roberts et al. 2012), IS research has also examined this construct at the individual level and conceptualized it as prior related knowledge (Ko et al. 2005) or an individual's ability to utilize available knowledge (Griffith et al. 2003). Absorptive capacity is conceptualized here at the individual level because the focus is to understand the effect of KMS use on job performance at the individual level. In addition, absorptive capacity is conceptualized as a capability rather than as prior related knowledge, because there is greater

agreement among researchers that such a conceptualization is more appropriate (Roberts et al. 2012). The main components of absorptive capacity are to understand new knowledge and utilize it (Jansen et al. 2005). Prior work theorizes a positive relationship between absorptive capacity and knowledge transfer (e.g., Tsai 2001). When employees engage in rich use of a KMS, they need to explore the system intensively, learn, and apply new knowledge about the system. For example, employees may need to learn how to customize a KMS feature to support their tasks. Without the ability to absorb new knowledge, employees may find it difficult to enhance their job performance through the effective use of the system. The incorporation of absorptive capacity thus sheds light on our understanding of the relationship between rich use of a KMS and job performance.

Cognitive absorption describes the optimal experience of using a KMS. In such a state, employees become curious about the KMS. Such curiosity will drive them to explore the system (Venkatesh 1999). Consequently, they will spend hours using the system to tackle challenging problems, such as searching for information or engaging in extensive discussions with experts in different domains. Prior studies have indicated curiosity is a situational intrinsic motivator (Venkatesh 1999) that could have a significant effect on cognitive (concentration or attention, memory or conceptual learning), affective (interest, positive emotion, satisfaction, anxiety), and behavioral outcomes (persistence at task, intensity, complexity, performance) (Vallerand 1997). Although cognitive absorption increases employees' opportunities to acquire new or diverse knowledge, whether employees can use such knowledge to achieve better job performance is dependent on employees' capabilities to assimilate and apply such knowledge (i.e., absorptive capacity). Employees who have a higher level of absorptive capacity will be likely to assimilate new knowledge or integrate different knowledge more effectively and efficiently, strengthening the positive effect of cognitive absorption on job performance.

(Xiaojun Zhang 2017) Likewise, when employees engage in deep structure use, they will be likely to encounter more questions or problems arising from using various features. To resolve various problems, they may need to learn new knowledge, compare it with existing knowledge, or integrate different knowledge. This is easier for employees who are more capable of learning and applying new knowledge, such as the strengths and weaknesses of various features. The more features they explore, the more likely they will learn and apply new knowledge in completing job tasks. Consequently, they can leverage these features to enhance their job performance. For employees who have a low level of absorptive capacity, they may experience challenges in understanding the intricacies and nuances of various features. The more features they explore, the more likely they will come across questions that they may not be able to address. This may prevent them from leveraging the right features to enhance their job performance. Consequently, these employees will be less capable of taking advantage of deep structure use to enhance their job performance, resulting in a weaker effect of deep structure use on job performance.

V. PERCEIVED SUPPORT FOR CONTEXTUALIZATION

Perceived support for contextualization is defined as the extent to which an employee perceives the capability of a KMS to provide context information in facilitating the assimilation of knowledge (Majchrzak et al. 2005). The intricacies of various tools and devices of a KMS increase the difficulty of utilizing it for the completion of job tasks. If a KMS can be designed to reduce the cognitive effort in learning the system and facilitate knowledge assimilation, it will be likely to increase the effect of use on performance. The support for contextualization will likely be more important for employees who engage in rich use of a KMS because these employees will be likely to process a large amount of information—some of which may be ambiguous or difficult to understand. Under such circumstances, providing relevant context information may help employees understand the linkage between different pieces of information, thus facilitating their comprehension of the information. Also, prior work has indicated context information leads to more efficient and effective information processing because it prioritizes information and provides alternative views on cause-effect links (Majchrzak et al. 2005; Setia et al. 2013). A KMS can convey context information to help employees better understand the knowledge in the system. Prior research has indicated four dimensions of support for contextualization: transparency of authorship, easy access to knowledge, comparison of multiple perspectives, and handling of emergent knowledge (Majchrzak et al. 2005). Given the importance of context information in realizing the benefits

of rich use of a KMS, perceived support for contextualization is incorporated as a contingency factor to understand the relationship between KMS use and job performance.

When a KMS supports contextualization, it provides context information to help a user understand a piece of knowledge with respect to its creator(s), application boundary, and evolution. The context information may also include the presentation of multiple perspectives regarding cause-effect links (Majchrzak et al. 2005). In a state of cognitive absorption, employees get focused and will be likely to process more information. If relevant context information is provided to facilitate information processing and knowledge application, employees will be likely to perform better. For example, by knowing the evolution and the application boundary of a piece of knowledge, employees can better apply the knowledge for the completion of their job tasks, resulting in better job performance.(Xiaojun Zhang 2017).

VI. TASK NONROUTINENESS

Task nonroutineness is defined as the extent to which an employee perceives a task to have many exceptions or unexpected events (Haerem and Rau 2007; Keller 2012; Maruping et al. 2009). Numerous features of a KMS increase the difficulty of identifying the right features for the completion of various job tasks, especially for tasks that are uncertain, less structured, or without predefined solutions (Keller 2012). It is generally difficult to accomplish a nonroutine task using preset procedures (Maruping et al. 2009). Due to the lack of predefined solutions, employees may need to explore various potential solutions when tackling nonroutine tasks. Given that employees who engage in deep structure use will explore various features of the system, they will be more likely to find the right features that facilitate the completion of nonroutine tasks. In addition, tackling nonroutine tasks requires substantial information processing (Faraj and Yan 2009). In a state of cognitive absorption, employees get focused and will be likely to process more information. Moreover, tackling nonroutine tasks requires employees to spend a significant amount of time and effort interacting with the system. If they enjoy using the system, they will be more likely to work persistently without weariness until they find solutions. On the contrary, a routine task is likely to be accomplished by following explicit guidelines and rules. It may not require employees to enter a state of cognitive absorption and deep structure use to solve some simple problems. (Xiaojun Zhang 2017) Therefore, the effectiveness of rich use will likely be more salient for nonroutine tasks. Hence, the incorporation of task nonroutineness as a contingency factor will shed light on our understanding of the relationship between use and performance.

VII. PERSONAL AND CULTURAL VALUES

Those in charge of knowledge management initiatives in IT companies point to the creating a culture of knowledge sharing as the prime challenge that companies face in implementing knowledge management. Since most people think that knowledge is power they tend to hoard it, hence making them share it within becomes a difficult task. The effective way to transfer knowledge is for people to find others who have it and talk to them. This, however, becomes difficult when companies grow large or where knowledge content of tasks is high.The number of mature knowledge management tools is on the increase, which aids in making knowledge management a more scientific process. Most organisations however tend to develop their own knowledge management solutions. Employees attitude towards radical change in the ongoing system is also a problem to be dealt for.Huge network needs to be set up for implementing knowledge management ay to transfer knowledge is for people to find others who have it and talk to them. This, however, becomes difficult when companies grow large or where knowledge content of tasks is high. The number of mature knowledge management tools is on the increase, which aids in making knowledge management a more scientific process. Most organisations however tend to develop their own knowledge management solutions. Employees attitude towards radical change in the ongoing system is also a problem to be dealt for.

Huge network need to set up for implementing knowledge management Information system.

VIII. CONCLUSION

The focus of this paper has been on the analysis of the relationship among Rich use of Knowledge Management System on Organization performance after carrying out an systematic review results have shown that rich use of system is more effective than the lean use more importantly, it has shown that employer has to play a major role on putting their employees on cognitive state so that it leads to the optimal experience, which brings their be more volunteer and ready to stretch their bodies and minds to their limits to accomplish something challenging. Although in the deep structure use employees pay more attention when using a system there are likely to develop a better understanding of the systems that may help the employees for better leverage to the system to complete job tasks. Therefore level of involvement on using Knowledge Management system leads to job performance.

Overall, the finding leads to the conclusion that the contingency variables such as Transformational leadership, Absorptive capacity, perceived support for contextualization, task non routineness and Personal and cultural values of the employees also affect the relationship between knowledge management system use on job performance. In conclusion, the attained reviews support that, employees performance was affected by the extent to which they engage in rich use of KMS.

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