

Knowledge Management with IS/IT Practice in Organizations: A Multilevel Perspective

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ABSTRACT

This paper is motivated by social influence theory implying the multilevel nature of knowledge management (KM) in an organization. Organizational knowledge is generated and distributed by individuals from different groups across organizational boundaries. Its transfers are supported by IS/IT practice, i.e., the individual and collective use of the technology available in the organization. I propose a multilevel perspective to explain how IS/IT practice supports multilevel KM capabilities to manage organizational knowledge successfully and how the effectiveness of multilevel KM capabilities expands into the improvement of multilevel task-related organizational performance. The multilevel KM theory extends the knowledge-based view of the firm by describing the dynamic process through which strategic values of knowledge are generated by IS/IT practice across the organizational levels. This paper also discusses multilevel insights on the strategic value of organizational learning based on the social context of organizations.

Keywords: Knowledge Management, IS/IT Practice, Organizational Performance, Multilevel Perspective

I . Introduction

The knowledge-based view (KBV) of the firm considers organizational knowledge a key source of sustainable competitive advantage because such knowledge allows organizations to accurately predict the nature and commercial potential of changes in the environment and the appropriateness of strategic directions (Cohen and Levinthal, 1990). Without or-

ganizational knowledge, organizations are less capable of discovering and exploiting new opportunities in their markets. However, KBV mainly focuses on the positive impacts of organizational knowledge on organizational performance, thus ignoring what organizational knowledge is in nature. For example, one research stream of KBV has focused on organizational members' activities and behaviors at the individual level without consideration of collective

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knowledge in an organization because the agents who create, transfer, share, and apply knowledge are individuals themselves (e.g., Hwang et al., 2015; Lu et al., 2017; Pu et al., 2022; Teigland and Wasko, 2003). The other KBV stream has considered organizational knowledge as a collective set of individuals' knowledge at the group or organizational level by aggregating individual knowledge-related activities into the higher levels (at the team or firm levels) organizational behaviors (e.g., Kim et al., 2021; Kim et al., 2014; Okhuysen and Eisenhardt, 2002; Sturm et al., 2021).

These two separated approaches of KBV-oriented studies cannot correctly explain how organizations manage their knowledgeable workers' expertise in tasks and business and whether the collection of individual knowledge managing behaviors enhances group- and organization-wide outcomes. A multilevel perspective to organizational knowledge might explain the complex knowledge management (KM) process amid individual knowledge managing behaviors and collective knowledge characteristics in organizations. Such multilevel insights might be required in understanding multiple KM efforts and their impact on organizational performance at different levels. KM can be observed within the social context of organizations. Not only do individuals manage their knowledge, but organizations collect and manage the set of such knowledge through organization-wide KM processes (Robinson and O'Leary-Kelly, 1998). KM is not limited to a single level but instead occurs across multiple levels: i.e., the individual, group, and organizational levels (Crossan et al., 1999).

Organizational IS/IT is a broad concept that specifically explains internal organizational capabilities because it determines how information flows are designed within organizations to meet organizational

needs (Ruiz-Mercader et al., 2006) and because its crucial function is to channelize and utilize knowledge within and outside an organization (Ravichandran and Lertwongsatien, 2005). In addition, how individual members use given technology and participate in systems determines their capability to manage necessary knowledge for various specific tasks in organizations.

Considering the supporting role of IS/IT in KM, I expect that KM activities and processes must adequately align with the individual use of technology, which people rely on to organize existing knowledge, and with the group- and organization-wide collective practice, which people participate in to interact with others for new knowledge. IS/IT usage/practice as critical internal factors of organizations in forming human-technology fit for the successful KM. The supporting role of individual use of technology and collective IS/IT practice in KM has been supported by several theoretical grounds of KBV (Kim et al., 2014; Ravichandran and Lertwongsatien, 2005; Ruiz-Mercader et al., 2006).

Drawing on the organizational capabilities perspective, the KBV implies that organizations internally leverage their existing knowledge and create new knowledge, thus favorably positioning in their external conditions (Gold et al., 2001). In this sense, organizational IS/IT enhances the absorptive capacity (Cohen and Levinthal, 1990), the organizational abilities to use prior knowledge and to recognize the value of new information and assimilate organizational knowledge which are emergent from individual abilities to apply existing knowledge to create new knowledge and capabilities through technology use (Kim et al., 2018). In addition, organization-wide IS/IT (e.g., intelligence systems, communications systems, management information systems, decision support systems, and administrative control systems)

determines the fundamentals of organizational functioning (Huber, 1982). Such organizational IS/IT is a decisive factor of how the collective of organizational members effectively manages organizational knowledge. The use of technology supports individuals' critical capabilities to accumulate and connect internal strategic assets (at the individual level). The IS/IT practice helps organizations understand the industrial structure, seek environmental opportunities, and create business value (at the organizational level).

Furthermore, knowledge combination and socialization through IS/IT-mediated interactions among team members (at the group level) demand social capital to create valuable knowledge (Nahapiet and Ghoshal, 1998; Nonaka, 1994), the social capital that team members can effectively attain through task-oriented interactions (e.g., community of practice) when the interactions are activated by IS/IT. Gold et al. (2001) suggested that the social capital needs to be maximized by technical, structure, and cultural infrastructures. The infrastructures must be leveraged for KM processes to store, transform, and transport knowledge throughout the organization.

For these rationales, this paper explains the two main research questions based on the social context of organizations: (1) how multilevel IS/IT practice supports multilevel KM capabilities to manage organizational knowledge successfully; (2) how the effectiveness of multilevel KM capabilities expands into the improvement of multilevel task-related organizational performance. By answering these research questions, I expect to deeply understand multilevel emergent features and consequential relationships of KM capabilities,¹⁾ IS/IT practice,²⁾ and organiza-

tional performance.³⁾

II. Multilevel Perspective to Knowledge Management

The KBV suggests that organizational knowledge contributes to a firm's prosperity and survival over time by generating sustainable competitive advantages (DeNisi et al., 2003). Such strategic values of organizational learning can be realized when a firm's knowledge is shared with individual members, who belong to different groups, across organizational boundaries due to knowledge stickiness (Szulanski et al., 2016).

Practically, individual workers are less likely to learn new knowledge from other groups even in the same organization if the unique expertise conflicts with their prior knowledge. Adopting such new knowledge at the individual and group levels causes learning curves to train themselves for the initial period of learning from others (Haider and Mariotti, 2020). This inward-looking bias causes the so-called "not-invented-here" syndrome at the organizational level (Burcharth and Fosfuri, 2015).

Theoretically, Wang et al. (2013) proposed that social influences across the different social groups in an organization explain the interplays of the bottom-up effects across hierarchical levels, the peer-level effects within each level, and the top-down effects on individuals' KM system use and innovation

ization at the group level, and internalization and externalization at the organizational level (Sedera and Gable, 2010).

- 2) This paper defines IS/IT practice as the use of a variety of technology available in an organization to gain the multilevel KM capabilities (Burton-Jones and Straub, 2006).
- 3) In this paper, organizational performance indicates task-oriented performance at each level of a firm: e.g., individual's task completion, group-level collaboration, and organization-wide performance.

1) In this paper, KM capabilities refer to knowledge creation, knowledge retention, knowledge transfer, and knowledge application at the individual level, combination and social-

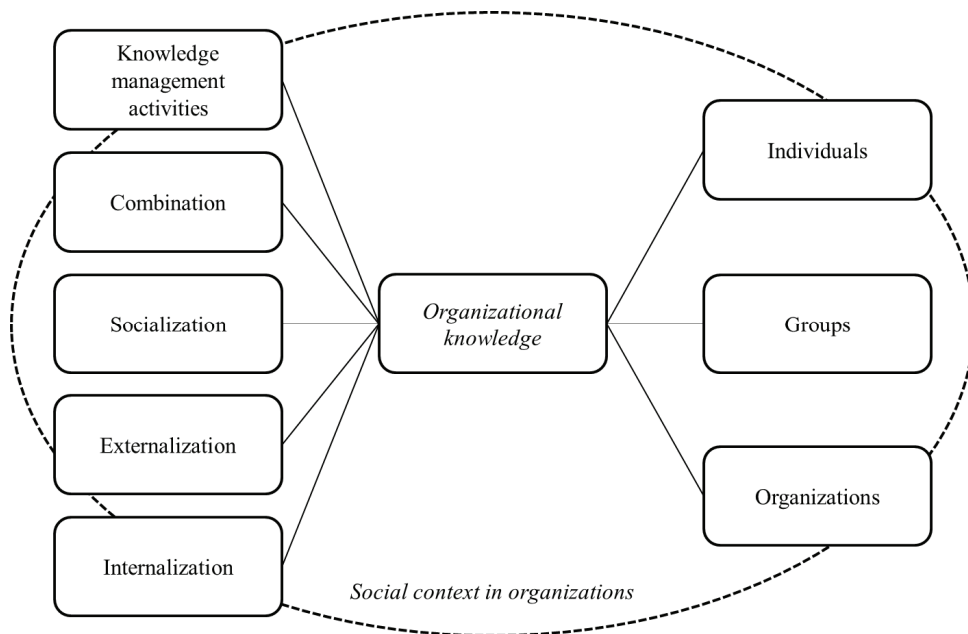
diffusion. According to social influence theory (Kelman, 1958), an individual's attitudes, beliefs, and consequent behaviors are influenced by referent others through social processes: i.e., compliance to behave in a certain way to gain rewards and avoid punishment, internalization to assimilate others' opinions and acts, and identification to adopt behaviors that conform to those of respected social groups. The theory implies that that an individual's KM activities are influenced by his/her coworkers, such social influences cause multilevel dynamic interactions in an organization from the social contextual view (Malhotra and Galletta, 2005; Wang et al., 2013).

The practical challenge for successful KM (the not-invented-here syndrome) and the social influence theory call for multilevel understandings of organizational learning to explain how knowledge generates sustainable competitive advantages across the levels in a firm. The multilevel KM units and their KM capabilities in managing organizational knowledge

can be simultaneously considered in the social context of dynamic organizations, as shown in <Figure 1>.

2.1. Consequence of Knowledge Management Processes to Task Performance

Unlike the resource-based view (RBV) of the firm, the KBV differentiates the strategic value of organizational knowledge from the value of other tangible assets in organizations. KM refers to "the systematic effort to capture, store, retrieve, reuse, create, transfer, and share knowledge assets within an organization, in a measurable way completely integrated in its operational and business goals, in order to maximize innovation and competitive advantage" (Dayan and Evans, 2006, p. 70). In this sense, organizational KM efforts generate and encourage activities to meet environmental requirements, organizational characteristics, human needs, and technology features simultaneously.



<Figure 1> Social Contextual View based on the Multilevel Perspective

To increase the strategic value of organizational knowledge, organizations accumulate their knowledge stock and regulate external and internal knowledge flow (DeCarolis and Deeds, 1999; Dierickx and Cool, 1989). The underlying point of KM is that organizations manage and leverage their knowledge-oriented capabilities (knowledge resources and skills) in the constantly changing uncertain environments (Grøhaug and Nordhaug, 1992; Teece, 1985). If an organization maintains effective KM, its knowledge can be recognized as the most valuable but under-used resource. The organization can place the intellectual capital at the center of what it does (Ash, 1998; Gopal and Gagnon, 1995).

Based on the KBV, an organization accumulates valuable internal knowledge and external knowledge from other organizations. In addition, to expand the created knowledge into a competitive advantage, KM may have less to do with building up new knowledge than with sealing off an area from exploitation by others, thus adding value to the knowledge already held (Griliches, 1990; Spender and Grant, 1996).

Considering the strategic value of organizational knowledge, I therefore propose that KM capabilities enhance organizational performance, as follows:

Proposition 1. Organizational capabilities through the successful KM improve task performance across the individual, group, and organizational levels.

2.2. Strategic Role of IS/IT Practice in Knowledge Management

RBV-oriented IS studies have explained the roles/functions of IS/IT in organizations (e.g., Ravichandran and Lertwongsatien, 2005). Generally, prior RBV studies imply that the critical role of IS/IT is to support and enhance organizational core com-

petencies even though they could not show how IS/IT-oriented assets/capabilities directly improve organizational performance. Their finding indicates that how effective a firm is in employing IS/IT to support its core competencies is significant in enhancing its organizational performance and achieving competitive advantages. Based on the structure-conduct-performance model of industrial organizations economics (Porter, 1980; Porter, 1985; Ravichandran and Lertwongsatien, 2005), an organization must focus on both internal and external conditions in planning and executing its strategic KM (Barney, 1991; Conner, 1991; Grant, 1991; Ravichandran and Lertwongsatien, 2005; Wernerfelt, 1984). In the course, IS/IT provides organizational resources and capabilities not only to accumulate and connect its internal knowledge but also to understand the industry structure, seek environmental opportunities, and create value.

Thus, it is obvious that IS/IT-oriented capabilities are a critical factor supporting organizational competence in managing knowledge at the organizational level. The IS/IT practice is a complicated routine of all corporate sections and within the IS/IT department at the group level. IS/IT core functions include planning sophistication, systems development capability, IS support maturity, and IS operations capability. In prior studies, the core roles of IS/IT have been ignored in supporting KM even though IS/IT functional capabilities enhance the core KM competencies (Ravichandran and Lertwongsatien, 2005). Such roles of IS/IT, as organizational capabilities, are expected in connecting core KM competency and organizational effectiveness because IS/IT capabilities can increase the efficiency of transformation from knowledge as input into knowledge as the output of KM (Collis, 1994; Ravichandran and Lertwongsatien, 2005).

Therefore, I propose the supporting role of IS/IT-oriented practice in organizational KM, as follows:

Proposition 2. IS/IT-mediated practice supports the organizational competence of KM across the individual, group, and organizational levels.

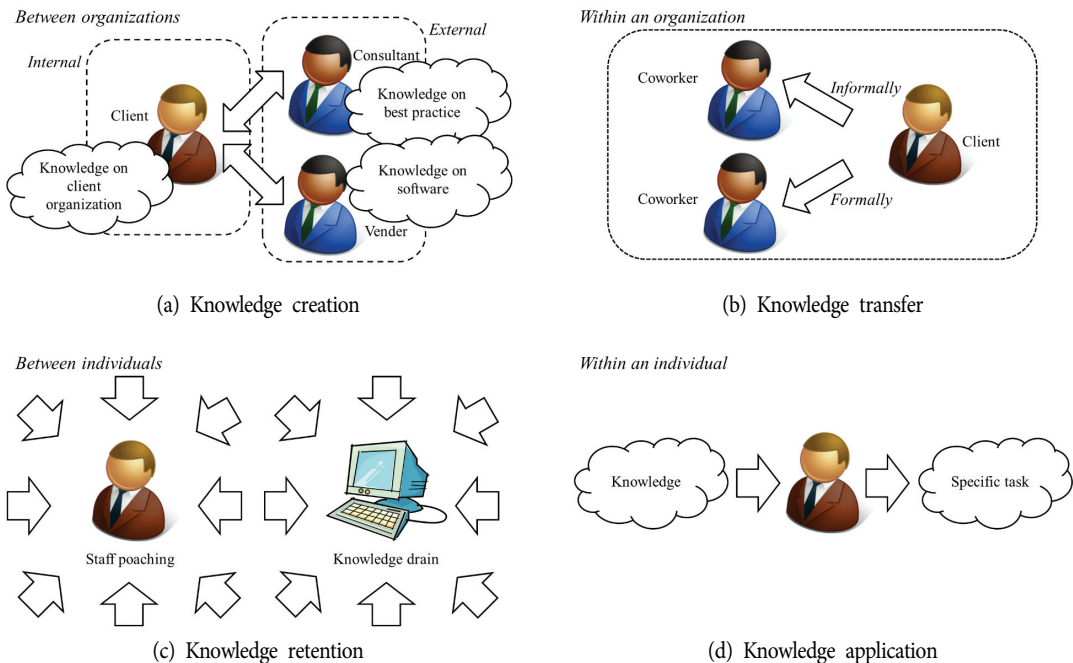
III. Organizational Knowledge Management

3.1. Knowledge Management Activities

KM literature has focused on key KM activities to explain how to effectively manage organizational knowledge, thus forming a consensus that KM is a set of multiple systematic activities. Prior KM stud-

ies suggest that the consensus is apparent with four common phases spanning KM lifecycle: i.e., knowledge acquisition/creation/generation, knowledge retention/storage/capture, knowledge share/transfer/disseminate, and knowledge application/utilization/use (Sedera and Gable, 2010). Following the consensus, I define four key KM activities at individual level as (a) knowledge creation (acquisition/creation/generation), (b) knowledge retention (retention/storage/capture), (c) knowledge transfer (share/transfer/disseminate), and (d) knowledge application (application/utilization/use).

Organizational members can internally and externally create organizational knowledge in the expanded social context between organizations. The developed knowledge can be formally and informally transferred among organizational members within an organization. After that, other members can access



<Figure 2> Knowledge Management Activities at the Individual Level

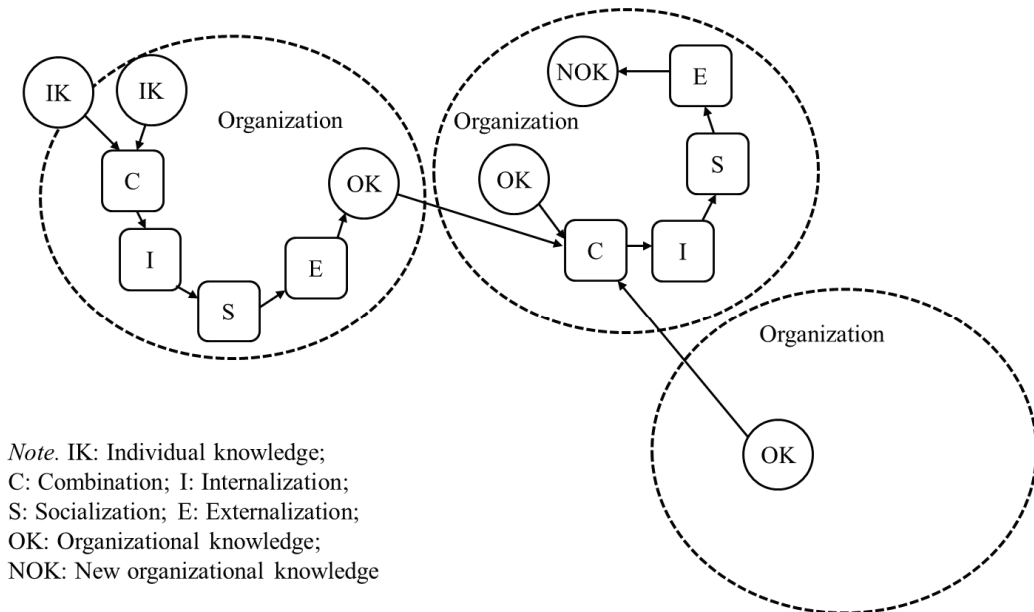
the knowledge accumulated within the organization through people-to-people and people-to-technology contacts. Finally, each member will apply the knowledge to complete their specific tasks. These individual KM activities are represented in <Figure 2>.

3.2. Knowledge Management Processes

Prior KM studies have recognized KM processes as ongoing KM activities embedded in organizations' social and physical structure with outcomes, i.e., organizational knowledge (Pentland, 1995). In a similar vein, KM can be defined as a systematic approach to managing organizational knowledge to create value (O'Dell and Grayson, 1998). Managing organizational knowledge is the process of capturing the organization's collective expertise from different sources (corporate systems, documents, and knowledgeable workers) and utilizing the knowledge sources to leverage organizational performance (Hibbard,

1997).

In this sense, I consider the different KM processes simultaneously to understand group- and organization-level KM. Nonaka (1994) suggests the dynamic theory of organizational knowledge in which group- and organization-level KM processes are distinguished from each other. That is, combination (from explicit knowledge to explicit knowledge) and socialization (from tacit knowledge to tacit knowledge) are group-wide KM processes, whereas internalization (from explicit knowledge to tacit knowledge) and externalization (from tacit knowledge to explicit knowledge) are observed at the organizational level. Simultaneously considering group- and organization-level KM processes, I postulate that the cross-level relationships of key KM processes in generating new organizational knowledge from individual knowledge through dynamic processes within and between organizations, as shown in <Figure 3>.



<Figure 3> Dynamic Process of Organizational Knowledge

3.3. IS/IT Practice

With the KM activities at the individual level and the dynamic KM process at the group and organizational level, each level of KM capabilities is supported by corresponding-level IS/IT practice. For example, individuals use e-mail as a tool for conversational interactions to transfer and share knowledge with others and organize their knowledge. In addition, we can observe group-wide collaborations through discussion forums and blogs, which are mechanisms supporting group members to provide the necessary expertise to each other. Finally, wikis provide a space where organizational knowledge can be synthesized by encouraging individuals to contribute to KM in organizations. The IS/IT practice is classified from individual use of technology to group- and organization-wide IS/IT practice, as shown in <Table 1>.

The use and practice of IS/IT reflect not only the effectiveness of KM processes and the quality of organizational infrastructures (technology, structure, and culture) but also the organizational ability to alleviate internal inconsistency between the KM processes and the corporate infrastructures. In implementing KM, organizational learning and memory (organizational knowledge) supported by organizational IS/IT quality improve organizational effectiveness/productivity (DeLone and McLean, 1992; Jennex

and Olfman, 2002; Jennex et al., 2003). In addition, organizational knowledge is embedded in and distributed across knowledge-based artifacts in organizations (Tsoukas, 1996). Thus, this paper assumes that the supporting roles of multilevel IS/IT practice correspond with the multilevel KM capabilities, thus improving multilevel task-related performance in organizations.

IV. Multilevel Knowledge Management Theory

4.1. Multilevel Emergence of Consequent Relationships

Internal development of resources generates potential strengths: the greater stability and predictability of a firm's knowledge, the better coordination and control, enhanced socialization, and the lower transaction costs (Lepak and Snell, 1999). A firm that can accumulate its knowledge will achieve competitive advantages over competing firms if the knowledge is rare, valuable, substitutable, and difficult to imitate (Barney, 1991; Dierickx and Cool, 1989; Rumelt, 1984). According to the RBV, competitive advantages result from those resources and capabilities owned and controlled by a single firm

<Table 1> Classification of the Multilevel IS/IT Practice

Level	Examples of IS/IT Practice
Individual	E-mail, tagging, personal folder, personal profile, personal search engine, social search, mentoring, advice from supervisor and expert in field, and professional journal
Group	Discussion forum, blog, documentation, web feed, group posting, online community, community of practice, internal expert, conference and seminar, content rating, and tag cloud
Organization	Wiki, portal system, organizational intranet, strategic alliance, benchmarking, outsourcing, consulting service, internal and external technical report, newspaper, feedback from supplier and customer, company bulletin, training and development, and research and development

(Dyer and Singh, 1998).

Organizations concentrate on those resources housed within their boundaries to accomplish competitive advantages. At the same time, they purchase standardized and nonunique inputs—e.g., everyday knowledge—that cannot be sources of competitive advantages because such inputs are either readily available to all competing firms or because the cost to acquire the inputs is approximately equal to the economic value to creating the inputs firsthand (Barney, 1986). Moreover, the internal accumulation of knowledge through organizational learning functions as an essential driver, creating value. It opens new productive opportunities for the firm, enhancing organizational abilities to exploit such opportunities (De Clercq and Dimov, 2008; Penrose, 1995; Spender and Grant, 1996). In this regard, an organization's competitive advantages can be explained mainly by its absorptive capacities and abilities to exploit internal knowledge (Cohen and Levinthal, 1990; De Clercq and Dimov, 2008). Learning within a particular organization is an essential source of internal knowledge development, increasing not only a firm's average performance but also the reliability of the performance (Levinthal and March, 1993; Levitt and March, 1988); the learning is closely related to absorptive capacities that provide key learning capabilities supporting the firm's prior knowledge (Cohen and Levinthal, 1990; De Clercq and Dimov, 2008). These capabilities could be developed over time through the continuous interaction of a firm's current activities and prior knowledge (Van den Bosch et al., 1999). Eventually, internally continuing action and experience in a particular domain create deeper understandings of the domain, enhancing domain-specific learning (Cohen and Levinthal, 1990). Such domain-specific capabilities to develop "deeper knowledge" are a source of competitive advantages (Grant,

1996a).

Considering the KM process across levels, the group-level consequent relationship between KM processes and team performance emerges from the individual-level consequent relationship between KM activities and job performance of group members. In the same vein, the individual- and the group-level consequent relationships form the organization-level consequent relationship between KM capabilities and task performance in organizations. I expect that the impacts of multilevel KM competences on task-oriented outcomes across levels emerge from lower to higher levels in organizations, thus indicating that each level of KM competences improves corresponding level performance. This expectation might show that the KM effectiveness was associated with KM competence, thus supporting the expansive effectiveness of KM processes.

Therefore, I propose that the impact of KM capabilities on task performance emerge upward, as follows:

Proposition 3. Multilevel consequent relationships between KM capabilities and task performance emerge from lower to higher levels in organizations.

4.2. Multilevel Supporting Role of IS/IT Practice

From a view of strategic management, organizational IS/IT has been explained as a critical enabler for an effective KM (Lee and Hong, 2002). Also, IS literature based on the KBV has indicated that organizational IS/IT is interlaced with KM by emphasizing the supporting role of IS/IT in synthesizing, enhancing, and expediting large-scale KM within/between organizations (Alavi and Leidner, 2001). Specifically, IS/IT-based systems enable organ-

izations to combine new sources of knowledge just in time for the knowledge creation process (Nonaka and Konno, 1998), to support individual and organizational memory through inter-group knowledge access for knowledge storage/retrieval process (Vandenbosch and Ginzberg, 1996), to form the more extensive internal network and more communication channels with faster access to knowledge resources for knowledge transfer process (Offsey, 1997; Robertson et al., 1996), and to rapidly apply new knowledge in many locations through workflow automation for the knowledge application process (Alavi and Leidner, 2001). In other words, the development of IS/IT-based systems in organizations supports individual KM activities and team- and organization-level KM processes by facilitating knowledge stock and flow in organizations (Kankanhalli et al., 2005). The multilevel practice through IS/IT-based systems has been considered a key explainer of successful KM.

In supporting KM, the IS/IT practice is emergent across levels in organizations (Burton-Jones and Gallivan, 2007). For instance, in knowledge creation activities, weak ties among organizational members which are supported individual use of technology (e.g., electronic mails, group support systems, etc.) are effective in reinforcing close ties among organizational members (e.g., communities of practice), which are the primary sources of organizational knowledge through a shared understanding or a collective knowledge base (Alavi and Leidner, 2001; Brown and Duguid, 1998). Another example is that in knowledge storage/retrieval activities, a lower memory through IS/IT causes a higher decision-making bias (Starbuck and Hedberg, 1977) and detecting and correcting errors (Argyris and Schön, 1978) which are resistant to organization-wide changes (Denison and Mishra, 1995). Another example is that in knowledge transfer

activities, organizational members who can access existing knowledge through organizational memory are less likely to seek their specified knowledge through available sources of alternative knowledge (Powell, 1998). Finally, individual knowledge application activities through the use of technology shape the practical usefulness of knowledge, the institutionalization of organizational knowledge into IS/IT practice, and the routinized KM by organizational IS/IT (Alavi and Leidner, 2001).

Considering such multilevel nature of IS/IT practice (Burton-Jones and Gallivan, 2007) in managing organizational knowledge, I propose that each level of IS/IT practice supports corresponding KM capabilities across the levels. Above prior studies also supported this proposition by showing conflicting results and different explanations on the influence of IS/IT according to the unit of analysis (Alavi and Leidner, 2001; O'Dell and Grayson, 1998).

Proposition 4. Supporting roles of IS/IT practice in KM emerge upward across the levels in organizations.

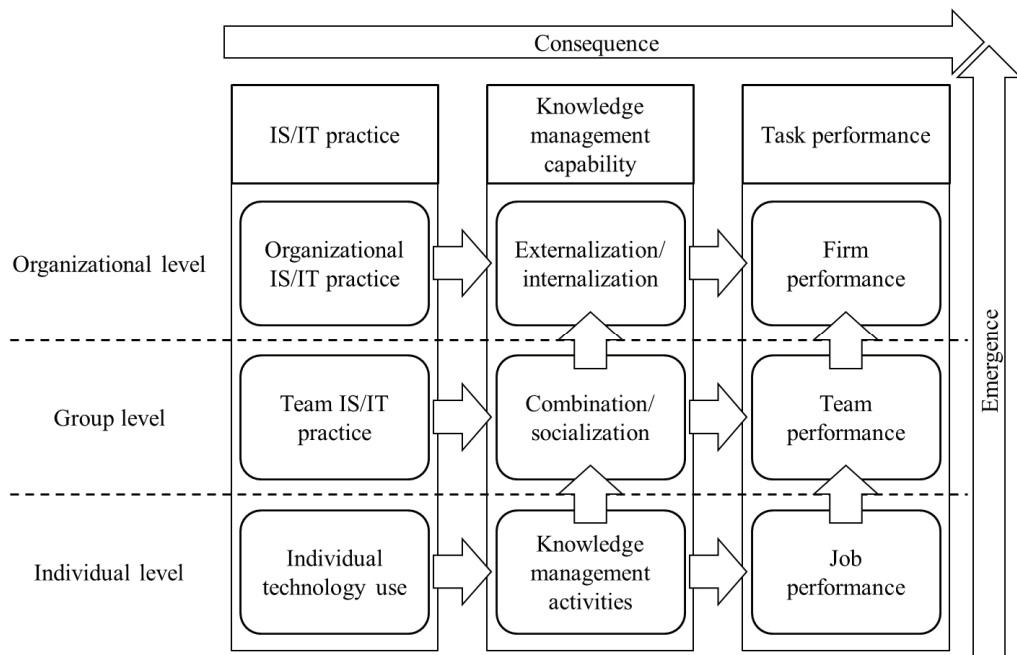
V. Discussion

KM literature suggests organizational knowledge as outcomes of collective learning through exploitation and exploration of individuals in organizations (March, 1991), thus suggesting that organizational knowledge is a crucial strategic source in improving organizational performance (Grant, 1996b; Nonaka, 1994; Spender, 1996). Exploitation provides explicit knowledge such as documented processes, directives, standards, or patents, which knowledgeable workers in organizations easily understand and apply with second-hand contacts (IS/IT-mediated practice) with knowledge sources. In addition, ex-

ploration generates tacit knowledge in experts' minds; thus, knowledgeable workers can attain the knowledge through direct experience and expertise working in organizations. However, prior KM studies have emphasized the importance of collecting, managing, and maintaining such codified and personalized knowledge in organizations (Dayan and Evans, 2006). Although successfully managing organizational knowledge has been a fundamental issue for organizations to be competitive (Heisig, 2002), the KM literature has connived the complex characteristics of multilevel processing for managing organizational knowledge itself. In this sense, this paper suggests four propositions regarding the consequence and emergence of multilevel KM capabilities with IS/IT practice and task performance in organizations. <Figure 4> represents the integration of consequent and emergent influences of KM as a multilevel KM theory in this paper.

5.1. Contributions

This paper explains how organizations manage their knowledge in the social context by suggesting a multilevel KM theory. In doing so, I propose that organizational KM competences, including individual KM activities as well as team- and organization-wide KM processes, effectively improve organizational performance. In addition, I define the role of IS/IT practice in enhancing KM competences and their effectiveness. This multilevel KM theory might provide a deeper understanding of how organizations generate sustainable competitive advantages by managing their knowledge with organizational IS/IT. I expect that the multilevel perspective is superior to the traditional KBV of prior studies because the critical processes of managing organizational knowledge and IS/IT-oriented capabilities are transformative factors in knowledge-intensive organ-



<Figure 4> Conceptual Model of the Multilevel Knowledge Management

izations, thus requiring theoretical considerations of both individuals and their collectives. The multilevel insights considering such transformative factors across levels as explanatory variables are necessary for KM and IS studies (Agarwal and Lucas, 2005). To satisfy these fundamental needs for KM and IS literature, this paper might suggest meaningful implications regarding the successful KM by considering the multilevel social context in organizations.

Theoretically, the multilevel KM theory extends the KBV by describing the cross-level dynamics of KM capability in an organization. The KBV argues the strategic values of organizational knowledge with a lack of explanations on the value creation process (DeNisi et al., 2003). From a multilevel viewpoint, this paper describes the dynamic process of how strategic values are generated across levels. This theoretical extension corresponds to the social influence theory (Kelman, 1958), implying the multilevel KM dynamics for organizational learning (Malhotra and Galletta, 2005; Wang et al., 2013).

Practically, the propositions based on the multilevel approach provide managerial insights on how to deal with the knowledge stickiness (Szulanski et al., 2016) and the not-invented-here syndrome (Burcharth and Fosfuri, 2015) for successful KM. In addition, the propositions describe the cross-level roles of technology in supporting a firm's strategic KM and reinforce the importance of technology-mediated practice to facilitate organizational learning across the levels.

5.2. Suggestions for Future Research

This paper calls for an advanced multilevel understanding of KM in organizations with technology. Future research may review relevant literature (e.g., attraction-selection-attrition perspective, social information processing theory, social learning theory, etc.) to develop the multilevel theoretical framework. In addition, the multilevel KM theory in this paper considers only emergent (bottom-up) influence from the lower to the higher levels. The follow-up research may reflect the top-down influence of KM capabilities in organizations to develop this theory sophisticatedly.

VI. Conclusion

This paper explains KM in organizations as a multilevel phenomenon, thus theorizing that organizational knowledge is managed and distributed across individuals, groups, and organizations with IS/IT practice. Therefore, this paper suggests a multilevel perspective to KM in organizations through theoretical consideration about *how multilevel IS/IT practice supports multilevel KM capabilities to manage organizational knowledge successfully* and *how the multilevel KM capabilities can improve multilevel organizational performance* in the social context of organizations.

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