

How to Facilitate Knowledge Ambidexterity with the Use of Enterprise Social Media

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Abstract: Organizations that operate under uncertainty need to cultivate their ability to manage their primary resource, knowledge, accordingly. Under such conditions, organizations are required to harvest knowledge from two sources: to explore knowledge that is to be found outside the organization as well as exploit knowledge that is contained within. In a knowledge management context these exploitation and exploration activities have been conceptualized as knowledge ambidexterity. While ambidexterity has been studied extensively in contexts as manufacturing or IT, the notion of knowledge ambidexterity remains scarce in current knowledge management research. This study illustrates knowledge ambidexterity and elaborates its positive impact on organizational performance. Our study furthermore answers the question of how the use of enterprise social media (ESM) can facilitate the performance effects of knowledge ambidexterity. Drawing on the theory of communication visibility, we argue that ESM (e.g., Microsoft Teams, Slack, etc.) allow employees to communicate unhindered while making these communications visible. This allows for capturing tacit knowledge within these communications - this form of knowledge is generally hard to codify and can be a source of competitive edge. With respect to knowledge ambidexterity, ESM use can capture tacit knowledge aspects originating from inside and outside the organization, which fosters the development of a competitive advantage and, thus, supports its positive effect on organizational performance. This paper contributes to IT-enabled ambidexterity research in two aspects: (1) It sheds light on knowledge ambidexterity and, thereby, addresses a major practical challenge for knowledge-intensive organizations, and (2) it elaborates on the effects that ESM use can have on the relationship between knowledge ambidexterity and organizational performance. This work-in-progress paper offers a better understanding of the phenomenon of ambidexterity in a knowledge context, while providing insights on the facilitating role of ESM. Our research serves as a foundation for future empirical examinations of the concept of knowledge ambidexterity.

Keywords: Knowledge Ambidexterity, Knowledge Management, Enterprise Social Media

1. Introduction

A considerable part of modern organizations faces increasingly uncertain conditions. Under such environmental conditions, organizational learning plays a crucial role for the prosperity of organizations: they need to conduct continuous learning activities to sense and seize opportunities in their environment (Zhou et al. 2019). Prior research has stated that under uncertainty organizations need to specifically pursue two sometimes conflicting learning activities at once: exploit existing knowledge and explore new knowledge (Geerts et al. 2010, North and Kumta 2018). These observations led to the shaping of the concept of ambidexterity. While all organizations need to cope with the tension these conflicting learning activities pose on them, they become increasingly important with rising degrees of knowledge-intensity (Junni et al. 2013) and provide a major challenge for knowledge-intensive organizations. However, only a few conceptualizations of the knowledge ambidexterity are available. The question arises of how organizational knowledge ambidexterity activities can be supported (e.g., Veeravalli and Vijayalakshmi 2019). One important aspect refers to the use of IT platforms. Prior research has coined the term IT-enabled knowledge ambidexterity and found a positive impact of IT infrastructure on organizational (innovation) performance (Benitez et al. 2018). However, there are some open questions about the role of specific IT platforms for knowledge management in the context of knowledge ambidexterity.

Given the relevance of knowledge as an organizational resource, it seems clear that organizations need to pursue appropriate knowledge management activities. Traditionally, organizations have been relying on knowledge management systems to manage organizational knowledge. However, recently one category of communication platform has gained increased relevance in the context of knowledge management, the so-called enterprise social media (ESM) (Veeravalli and Vijayalakshmi 2019). These platforms promise a variety of advantages over traditional knowledge management systems and, for this study, seem worth a closer look. To the best of our knowledge, no study has examined the role of ESM in the context of knowledge ambidexterity. Therefore, we

aim to gain a better understanding of how ESM can support knowledge ambidexterity activities. This study answers the following question: *What role does ESM use play in facilitating knowledge ambidexterity?*

To shed light on this topic, a causal research design seems appropriate. First, we develop a research model. Second, we plan to test our model against empirical data to determine if our hypotheses hold true. This work-in-progress paper describes the first step. It briefly describes the central concepts (ambidexterity as well as ESM use). It furthermore describes the research model development. Finally, concluding remarks are provided.

2. Knowledge Ambidexterity

With respect to organizational learning, March (1991, p. 71) described two central mechanisms: "the relation between the exploration of new possibilities and the exploitation of old certainties". This led to the coining of the concept of ambidexterity: The pursuing of both, sometimes conflicting activities does provide a challenge to organizations. Ambidexterity in general can be understood as the organizational capability to simultaneously pursue fundamentally different actions (Tushman and O'Reilly 1996). In addition to organizational learning, this organizational capability has been examined in a variety of contexts: technological innovation, organizational adaptation, strategic management, and organization design (Raisch and Birkinshaw 2008). Prior research have linked ambidexterity with increased organizational performance (e.g., O'Reilly and Tushman 2013, Kafetzopoulos 2021).

In an IT-context, the concept of ambidexterity has been examined as well. Lee et al. 2015 have examined the impact of IT ambidexterity on organizational agility. IT ambidexterity can be understood as "the ability of firms to simultaneously explore new IT resources and practices (IT exploration) as well as exploit their current IT resources and practices (IT exploitation)" (Lee et al. 2015, p. 398). However, examinations of organizational IT platforms for knowledge management an ambidexterity context remain scarce.

Recently, ambidexterity has been coined specifically in a knowledge context, i.e., knowledge ambidexterity (e.g., Vrontis et al. 2017). Knowledge ambidexterity represents a "firm's ability to use a well-balanced combination of exploration and exploitation of organizational knowledge for operational purposes" (Benitez et al. 2018, p. 9).

With respect to knowledge management, ambidexterity refers to knowledge exploitation and exploration activities as well. As both activities can be described as conflicting and they mean a certain tension for the organization (Im and Rai 2008). O'Reilly and Tushman (2013) describe three approaches that organizations can follow to cope with this tension: (1) sequential ambidexterity (sequential adaptation of structures and processes to meet environmental conditions), (2) structural ambidexterity (separate organizational units to carry out exploration and exploitation activities simultaneously), and (3) contextual ambidexterity (individuals' decisions on how to split their time between exploration and exploitation activities). There is an ongoing debate about whether exploitation and exploration activities need to be balanced (balanced approach) or maximized individually (combined approach) (Junni et al. 2013).

3. Enterprise Social Media Use

ESM can be characterized as IT platforms that are used for knowledge management within enterprises (Sun et al. 2019). ESM can be used in two ways: (1) For external communication with parties like customers, suppliers, or the public in general and (2) for the communication among employees. For this study we focus on the second mode, the internal communication. Following Leonardi et al. (2013, p. 2), we define ESM as "Web-based platforms that allow workers to (1) communicate messages with specific coworkers or broadcast messages to everyone in the organization; (2) explicitly indicate or implicitly reveal particular coworkers as communication partners; (3) post, edit, and sort text and files linked to themselves or others; and (4) view the messages, connections, text, and files communicated, posted, edited and sorted by anyone else in the organization at any time of their choosing". ESM offer employees communication functions as chatting, videoconferencing, (micro-)blogging, or virtual project rooms. They allow for the creation of user generated content and allow for a seamless information sharing across geographical and hierarchical distances (Laitinen and Sivunen 2021). Well-established ESM are Slack or Microsoft Teams.

With respect to knowledge management, the use of ESM promises a variety of advantages over traditional knowledge management systems (Mukkamala and Razmerita 2014). While the later typically require users to codify their knowledge and store this knowledge for later use, ESM capture knowledge that is contained within

the conversations of employees. By storing employee conversations and making them accessible to further employees, they allow for a dissemination of knowledge within the organization.

To understand the nature of communication in ESM, we draw on the theory of communication visibility from Leonardi (2014). This theory argues that it is the visibility of employee communication to third parties that creates positive effects for the organizations. In particular, the communication visibility leads to an improvement of metaknowledge: Who knows who and who knows what. This metaknowledge can help create more innovative products, which may increase competitiveness as well as performance.

4. Development of a Research Model

An ambidextrous organization is capable of leveraging existing competencies within as well as exploring new opportunities in the environment. The use of these capabilities can be expected to enhance organizational competitiveness and, finally, its performance (Vrontis et al. 2017). This positive impact has been shown by a number of studies (O'Reilly and Tushman 2013). We hypothesize that knowledge ambidexterity impacts positively on organizational performance (H_1).

ESM allow for an easy communication and collaboration among employees. We draw on the theory of communication visibility by Leonardi (2014) and argue that ESM use makes employee conversations about exploration and exploitation activities visible. It helps spreading this knowledge across organizations and enables a free information flow between employees. With respect to knowledge management, ESM can capture tacit knowledge – a major challenge for traditional knowledge management systems. This tacit knowledge has been described as a major asset for organizations as it is typically hard to grasp and cannot be easily imitated by competitors. It can be understood as a central component for gaining a competitive edge over rivals (Eisenhardt and Santos 2000). We expect ESM use to positively moderate the relationship between knowledge ambidexterity and organizational performance (H_2).

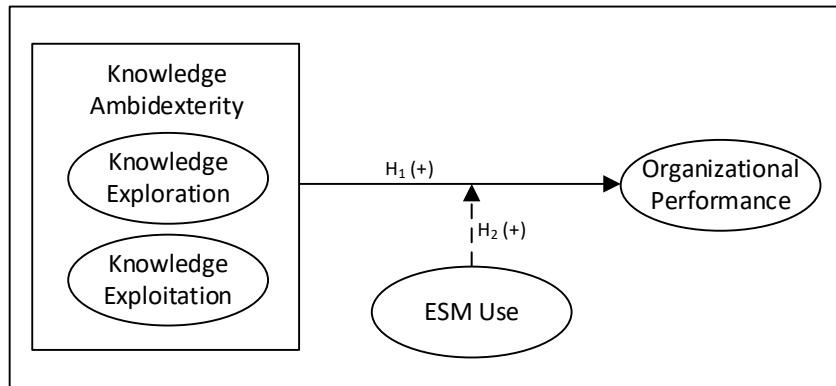


Figure 1: Research model

Figure 1 depicts our research model. Knowledge ambidexterity is our exogenous variable, conceptualized as a higher-order variable that comprises two lower-order variables: Knowledge exploration and knowledge exploitation. We link knowledge ambidexterity to organizational performance. ESM use serves as a moderating variable. We expect that with higher degrees of ESM use, the positive effect of knowledge ambidexterity on organizational performance will rise.

5. Concluding Remarks

This work in progress contributes to research on IT-enabled knowledge ambidexterity by examining the moderating role of ESM use. We explain how ESM can support the positive effects of knowledge ambidexterity on organizational performance. We explain this effect with the capturing of tacit knowledge. This is a theoretical contribution to the research stream of knowledge ambidexterity.

This work in progress study can serve as foundation for further examinations. In particular, empirical examinations are required to determine if our considerations hold true against real world data. We plan to conduct quantitative studies to examine the concept of organizational ambidexterity. Data from different organization may lead to fruitful insights to advance knowledge in this field.

One open question refers to the measurement model of knowledge ambidexterity. Ambidexterity has typically been measured with items in the exploration and exploitation dimensions. However, there is some doubts about how the interaction of these dimensions should be operated. One shortcoming of traditional ambidexterity measures is that they typically regard exploitation and exploration as two independent variables. We argue that this does not represent the tension that ambidextrous organizations need to cope with. Other papers have proposed different mathematical operations to capture the interaction between both ambidexterity dimensions. However, it remains unclear whether these measurement models capture the nature of ambidexterity. As the next step we plan to analyze different measurement models for ambidexterity and, if needed, will engage in the development of a new knowledge ambidexterity measurement model.

A fruitful way for further research could be in the question of what further constructs mediate the relationship between knowledge ambidexterity and organizational performance. Dynamic capabilities may play a major role in this regard. Future studies could examine different constructs in detail. One organizational variable that seems worth considering is organizational agility. Prior research has reported positive effect of ambidexterity on organizational agility (Lee et al. 2015).

Our research also reveals some insights relevant for practitioners. This study can help to understand the positive performance-related effects of ESM use. While ESM use generally has soared during the Covid-19 pandemic, organizations still need to understand how to leverage their positive effects. This study, therefore, can help organizations determine what organizational effects ESM use has and how the potential of these platforms can be leveraged.

References

- Benitez, Jose; Castillo, Ana; Llorens, Javier; Braojos, Jessica (2018): IT-enabled knowledge ambidexterity and innovation performance in small U.S. firms: The moderator role of social media capability. In *Information & Management* 55 (1), pp. 1–44.
- Eisenhardt, Kathleen M.; Santos, Filipe M. (2000): Knowledge-Based View: A New Theory of Strategy? In *Handbook of Strategy and Management*, pp. 1–55.
- Geerts, Annelies; Blindenbach-Driessens, Floortje; Gemmel, Paul (2010): Achieving a Balance Between Exploration and Exploitation in Service Firms: A Longitudinal Study. In *Academy of Management Proceedings* 2010 (1), pp. 1–6.
- Im, Ghiyoung; Rai, Arun (2008): Knowledge Sharing Ambidexterity in Long-Term Interorganizational Relationships. In *Management Science* 54 (7), pp. 1281–1296.
- Junni, Paulina; Sarala, Riikka M.; Taras, Vas; Tarba, Shlomo Y. (2013): Organizational ambidexterity and performance: A meta-analysis. In *Academy of Management Perspectives* 27 (4), pp. 299–312.
- Kafetzopoulos, Dimitrios (2021): Organizational ambidexterity: antecedents, performance and environmental uncertainty. In *Business Process Management Journal* 27 (3), pp. 922–940.
- Laitinen, Kaisa; Sivunen, Anu (2021): Enablers of and constraints on employees' information sharing on enterprise social media. In *ITP* 34 (2), pp. 642–665.
- Lee, One-Ki; Sambamurthy, Vallabh; Lim, Kai H.; Wei, Kwok Kee (2015): How Does IT Ambidexterity Impact Organizational Agility? In *Information Systems Research* 26 (2), pp. 398–417.
- Leonardi, Paul M. (2014): Social Media, Knowledge Sharing, and Innovation: Toward a Theory of Communication Visibility. In *Information Systems Research (ISR)* 25 (4), pp. 1–40.
- Leonardi, Paul M.; Huysman, Marleen; Steinfield, Charles W. (2013): Enterprise Social Media: Definition, History, and Prospects for the Study of Social Technologies in Organizations. In *Journal of Computer-Mediated Communication (JCMC)* 19, pp. 1–19.
- March, James G. (1991): Exploration and Exploitation in Organizational Learning. In *Organization Science* 2 (1), pp. 71–87.
- Mukkamala, Alivelu Manga; Razmerita, Liana (2014): Which Factors Influence the Adoption of Social Software? An Exploratory Study of Indian Information Technology Consultancy Firms. In *Journal of Global Information Technology Management* 17 (3), pp. 188–212.
- North, Klaus; Kumta, Gita (2018): Knowledge Management. Cham: Springer International Publishing.
- O'Reilly, Charles A.; Tushman, Michael L. (2013): Organizational Ambidexterity: Past, Present, and Future. In *Academy of Management Perspectives* 27 (4), pp. 324–338.
- Raisch, Sebastian; Birkinshaw, Julian (2008): Organizational Ambidexterity: Antecedents, Outcomes, and Moderators. In *Journal of Management* 34 (3), pp. 375–409.
- Sun, Yuan; Zhou, Xinjie; Jeyaraj, Anand; Shang, Rong-An; Hu, Feng (2019): The Impact of Enterprise Social Media Platforms on Knowledge Sharing. In *Journal of Enterprise Information Management* 32 (2), pp. 233–250.
- Tushman, Michael L.; O'Reilly, Charles A. (1996): Ambidextrous Organizations. In *California Management Review* 38 (4), pp. 8–30.
- Veeravalli, Suchitra; Vijayalakshmi, V. (2019): A Morphological Review of Enterprise Social Media Literature. In *Journal of Organizational Computing and Electronic Commerce* 29 (2), pp. 139–162.

- Vrontis, Demetris; Thrassou, Alkis; Santoro, Gabriele; Papa, Armando (2017): Ambidexterity, external knowledge and performance in knowledge-intensive firms. In *The Journal of Technology Transfer* 42 (2), pp. 374–388.
- Zhou, Jing; Mavondo, Felix T.; Saunders, Stephen Graham (2019): The Relationship between Marketing Agility and Financial Performance under different Levels of Market Turbulence. In *Industrial Marketing Management* 83, pp. 31–41.