



Examining the use of knowledge management during issue management

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Abstract

Purpose – Very few studies specifically address the importance of knowledge management (KM) in the context of issue management. To enhance understanding of this subject, this paper aims to investigate the interrelationship between KM and issue management.

Design/methodology/approach – A case study of a public protest against the construction of an energy company was conducted to investigate this topic.

Findings – The paper depicts how and why the occurrence of an issue may disturb the balance of an organization's KM practices from the perspectives of process, people, and technology, and how the managerial efforts can be made to counteract the negative effects. The primary findings are summarized in six theoretical propositions.

Research limitations/implications – The research findings were developed with reference to a failure case in which the issue of interest was not resolved. Future studies specifically examining the dynamics of organizations' KM practices during such issues with reference to cases in which the issues are resolved successfully are encouraged.

Practical implications – The research findings can aid organizations in planning their KM practices with regard to their specific business contexts during their issues in order to resolve such situations in an effective and efficient manner.

Originality/value – This paper provides insights into the dynamics of KM in the context of issue management, and enables future researchers to develop a programmed body of research in order to further expand our understanding of the use of KM at such times.

Keywords Knowledge management, Strategic management, Problem solving

Paper type Research paper

1. Introduction

The term “issue management” has its roots in the field of public relations and policies to represent the processes, activities, and mechanisms that organizations use to handle obstacles that are capable of compromising their continued health and success. In today's fast-changing business environment, issue management has become increasingly critical for organization as an essential means to acquire information about emerging problems and opportunities in their business contexts, with an overall focus on proactive strategic planning (Bronn and Bronn, 2002; Brooks and Waymer, 2009).

Knowledge, as a critical organizational resource (Hall, 1992; Zack, 1999), plays a crucial role in developing sustainable competitive advantages and dealing with substantial

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uncertainties to achieve strategic payoffs. Consequently, knowledge management (KM) has been recognized as an imperative part of overall organizational strategic planning. In order for organizations to continue to prosper, they must make effective use of their knowledge and align it with the components of their overall corporate strategies. Consequently, it is more valuable for organizations to consider KM and issue management in an integrated rather than independent manner.

While issue management has provoked some interest in the academic literature, very few of existing studies specifically address the interrelationships between KM and issue management with regard to organizational performance. To enhance our understanding of this subject, this study aims to investigate the role that KM plays in affecting organizations' managerial efforts in situations in which an issue is in progress, and vice versa, through an in-depth case study of a public protest against the pipeline construction plans of an energy company.

The structure of this paper is as follows: first, a literature review on issue management, KM, and a discussion on the relationships between these two research areas are presented. Second, the research methodology is described. Third, the background of the case investigated is provided, followed by the results of the data analysis. Finally, this study is concluded with a discussion of its implications, limitations, and directions for future research.

2. Literature review

2.1 Issue management

An issue can be considered an unsettled matter that has the potential to change the status quo in an organization's business environment (Oliver and Donnelly, 2007). An issue generally involves some degree of conflict with external parties in which emotions rather than data/fact dominate, resulting in stressful, anxious, and vague decision-making situations for individuals (Jaques, 2007b; Oliver and Donnelly, 2007). Consequently, issue management can be defined as the capacity to understand, mobilize, coordinate, and direct all the executive functions of problem solving, public relations, and long-range strategic and policy planning as well as communication of the determined strategies/policies internally and externally (Bowen, 2005; Heath, 1997).

Issue management, which is interdisciplinary by nature and incorporates concepts from various management-related domains, including public relations and policy, business ethics, information management, and communications, is closely related to crisis management, as an issue can develop into a crisis if it is not properly managed (Conway *et al.*, 2007; Heath, 1997; Jaques, 2007b). Consequently, in a crisis-management context, issue management is an indispensable means for achieving the task of detecting and resolving warning signals for crisis-prevention purposes and the task of effective post-crisis organizational learning and systems modification (Jaques, 2007a).

A study of current thinking about issue management reveals three dominant perspectives: issue life-cycle, legitimacy, and stakeholder theories (Nasi *et al.*, 1997; Roper and Toledano, 2005). Academics who embrace issue life-cycle theory argue that an issue is not essentially unpredictable, but instead develops gradually, relatively unsurprisingly, from a specific problem through a number of stages (Crable and Vibbert, 1985; Zyglidopoulos, 2003). Wartick and Heugens (2003) argue that the issue life-cycle models can provide analytical support for managers to begin their tasks in a relatively

unpredictable context and can be further reinforced theoretically by incorporating concepts from other branches of social sciences.

The essential idea of stakeholder theory of issue management is to identify and monitor the individuals and/or groups who affect or are affected by an issue, perform stakeholder prioritization, and then make strategic choices on related functional domains, including communications, corporate governance, and policy making for the purpose of reducing the tensions between organizations and their stakeholders in order to resolve the focal issues and establish long-term mutual trust (Oliver and Donnelly, 2007; Wartick and Heugens, 2003). Nasi *et al.* (1997) claim that stakeholder theory is the most compelling issue management perspective, since there is strong evidence that organizations tend to respond to the demands of their most powerful stakeholders, and then change their focus as different stakeholder groups gain or lose power over time.

Finally, legitimacy theory focuses on identifying and investigating the legitimacy gap, which refers to the discrepancies between public perceptions of what an organization is doing and what it is expected to do (Sethi, 1979). An organization's legitimacy can be better understood from the perspective of organizational reputation. Organizational reputation is a behavioral trait of an organization perceived by the public as a result of the consistent mode of behavior the organization demonstrates to its stakeholders, such as customers, shareholders, and employees (Dobson, 1991). The emergence of a legitimacy gap suggests there is a potential compromise of organizational reputation, and hence indicates the rise of an issue that can potentially threaten an organization's well-being (Roper and Toledano, 2005). Wartick and Heugens (2003) promote the integration of issue management and reputation management, claiming that such a move can provide greater insights into how to keep organizational reputation intact through proactive environmental inspection, issues monitoring, and well-designed response tactics. Additionally, organizational reputation appears to be more responsive to an organization's efforts to managing an issue, as compared to the traditional financial measures, and thus is a better indicator for evaluating the effectiveness of issue management (Heugens, 2002).

2.2 Knowledge management

Knowledge, as a critical organizational resource (Hall, 1992; Zack, 1999), plays a crucial role in generating, rather than just supporting, sustainable competitive advantages for achieving both organizations' short-term objectives and their long-term prosperity (Gloet, 2006; Grant, 1996; Holsapple and Singh, 2001). Consequently, organizations need to treat KM as an imperative organizational activity, and then take a strategic view to link their KM activities with their missions, strategies, and goals (Zack, 1999).

The importance of KM has been discussed from different perspectives, which are usually considered with reference to two essential concepts (Jasimuddin *et al.*, 2005; Valkokari and Helander, 2007). The first is the types of knowledge, including the classification of declarative from procedural knowledge (Anderson, 1983; Yi and Davis, 2003), the classic distinction of implicit and explicit knowledge (Polanyi, 1958; Nonaka, 1994), and the more recent categorization of know-what, know-how, and know-why (Lee and Strong, 2003; Yim *et al.*, 2004). Such distinctions are considered important since different means are required to retrieve, acquire, transfer, and utilize different types of knowledge (Alavi and Leidner, 2001).

The second key to understanding KM-related phenomena in organizations is the dynamics of the primary KM initiatives, including knowledge creation,

storage, distribution, and application/use (Holsapple and Joshi, 2002). It is generally contended that knowledge can be created, manipulated, shared, and justified through interpersonal social and collaborative processes (Alavi and Leidner, 2001; Nonaka, 1994; Rodrigues *et al.*, 2006). Additionally, some knowledge, to a certain degree, can be incorporated in organizational artifacts, including processes, structures, and technology, and be made competitive in a dynamic context through the continuous enforcement of the adaptive processes, such as higher order learning (Davenport and Prusak, 1998; Grover and Davenport, 2001). Furthermore, although the application of information technology (IT) does not guarantee the success of KM, the importance of IT to KM should not be overlooked, since it makes possible most KM implementation (Alavi and Leidner, 1999). Consequently, the literature indicates that organizations must take into consideration their individual organizational contexts when deciding how KM should be implemented in order to help their employees make the best use of various information technologies and interpersonal social activities/interaction processes to acquire the knowledge they need to perform their tasks successfully (Davenport *et al.*, 1998; Grant, 1996; Kim *et al.*, 2003; Tiago *et al.*, 2007).

Several frameworks have been proposed for the purpose of helping organizations conceptualize and plan for their KM implementations (Choi and Lee, 2003; Earl, 2001). For example, Zack (1999, p. 140) proposes a framework of knowledge strategy which consists of two dimensions. One dimension is a measure of the extent to which an organization is considered a knowledge creator (an explorer), a knowledge user (an exploiter), or a combination of both, which is referred to as an innovator. The other dimension refers to the knowledge source, which is classified into internal, external, and unbounded. The degree of the aggressiveness of the knowledge strategies increases gradually from the lower left to the upper right corner of the framework. For instance, Zack argues that organizations that primarily focus on exploiting internal knowledge (internal exploiters) employ the most conservative knowledge strategies. In contrast, organizations that focus on both exploring external knowledge resources to develop new knowledge bases and exploiting internal knowledge bases to seek business opportunities (unbounded innovators) can be thought of as employing the most aggressive knowledge strategies.

2.3 Relationship between KM and issue management

Performing successful KM practices to achieve the designated KM initiatives is not an easy objective to accomplish, particularly in a context in which organizations encounter a unique, threatening, and stress-inducing decision-making environment that must be dealt with in a timely and consistently manner. Additionally, when encountering specific issues, extra task demands often emerge for staff, and thus they have a relatively limited amount of time to learn the knowledge needed to effectively plan for and respond to certain problems. Consequently, knowledge gaps may appear in the organizations, and these represent the difference between the knowledge that an organization needs and the knowledge that it actually possesses (Zack, 1999). In order to close these knowledge gaps and, in turn, ensure successful issue management, organizations have to acquire the knowledge they need by means of appropriate KM approaches.

Previous discussions of issue management indicate that it needs to be incorporated into strategic business planning in order to enable organizations to handle the issues encountered in a relatively more proactive and effective manner (Bronn and Bronn, 2002; Heath, 2002). Similarly, KM has been recognized as an imperative part of overall

organizational strategic planning, particularly for the purpose of facilitating the creation of competitive advantages (Earl, 2001; Grover and Davenport, 2001). Consequently, it is more valuable for organizations to consider the strategic matter of these two areas in an integrated rather than independent manner.

While issue management has provoked some interest in the academic literature, interest in KM in organizations when handling issues has attracted little comment. However, there have been a few studies that implicitly stress the importance of organizations learning from their experience in handling issues in order to accumulate and preserve organizational knowledge for future use (Jaques, 2005; Mitroff *et al.*, 1994). Additionally, by taking a knowledge-based view of strategic planning, Heugens (2006) investigates how organizations may develop integrative organizational competence for achieving successful issue management through the integration and utilization of the knowledge of individuals. With intent to extend the contribution of these studies, this work is not about the use of KM for building organizations' issue-management capabilities. Instead, it intends to investigate whether and how the managerial behaviors of an organization and the decisions it makes when handling an issue impact those in its KM agenda and behaviors, and vice versa.

3. Research methodology

3.1 Data collection

The method of exploratory, in-depth case study was adopted for this research, and a natural gas company that experienced a public protest issue was investigated. Pseudonyms were developed and used to represent all the primary and secondary subjects, as well as their locations, to ensure confidentiality. Data were collected from multiple sources in order to achieve data triangulation and, in turn, ensure the construct validity and reliability of this study (Yin, 2003). The data sources include:

- Nine semi-structured, face-to-face personal interviews with two top executives, three line managers, and four employees with non-managerial positions.
- Two group sessions with line managers and employees.
- Documents from the participating company, including personal notes and memos, project review meeting minutes, and project assessment and review reports that were associated with the issue.
- Archival data from local newspapers and governmental reports about the issue.

Additionally, before the data-collection process officially began, the sample interview questions, data-collection protocols, and data-analysis techniques to be used in this study were sent to four academics and practitioners with relevant expertise for evaluation, and pilot interviews with two key informants were conducted in order to validate the interview instruments. Furthermore, the draft of the data analysis report was sent to three key informants in the participating organizations for review, in order to further validate the research findings. As a result, the construct validity and reliability of this study were ensured (Yin, 2003).

3.2 Data coding and analysis

This study adopts the logic of grounded theory for data analysis (Strauss and Corbin, 1997), which can be summarized by the following four characteristics. First, the researchers

engaged in data analysis while collecting data. This allowed the researchers to gradually adjust the orientation of their data-collection procedures based on their improving understanding of the research topic, which made the collected data become more focused. Second, the method of analytic coding (Lofland and Lofland, 1995) was adopted for the data-coding process. In the first stage of initial coding, the data collected were examined line by line in order to identify statements that were related to the study. When initial coding was completed, the second stage of focus coding began, in which the codes were sorted and categorized based on their conceptual similarities. During the process of sorting and categorizing codes, those that were considered irrelevant or relatively less productive were discarded. The remaining codes were then reexamined and their concepts were further elaborated for future analysis.

Third, the researchers used an inductive logic for data analysis in order to identify critical themes related to the research topic. These themes were then further analyzed using the technique of pattern matching in order to ensure internal validity (Yin, 2003). The fundamental logic of this technique is to compare an empirically based pattern or a rival pattern with one or multiple predicted patterns (Trochim, 1989). If the patterns are identical, the internal validity of the case study is strengthened. If there are two potential patterns, the task is to first determine whether the data matches one pattern better than the other, and then to appropriately explain and organize what was observed from the collected data. Fourth, the validity of the data analysis results was checked and verified by the research participants through three follow-up interviews.

4. Research results

4.1 Background of the case study

Shield Natural Gas Corporation (SNGC) was founded in 1988 for the purpose of providing safe and convenient delivery of natural gas to the public. Its service area includes the entire Spring County. The issue under investigation was SNGC's project of acquiring new business customers from an emerging industrialized area, Screen Industrial Park, in the Southern region of Spring County. Screen Industrial Park was initially developed for the purpose of attracting the business of companies in heavy industries, such as iron, steel refineries, and petrochemicals. Since the results of a risk assessment indicated that the project had great potential to generate new profit streams without significant risks, SNGC decided to carry out the project and started to invest in pre-construction operations in June 1995.

The project went well until an unexpected problem appeared in 1997, two years after starting, in the town of Carlton. Based on SNGC's original plan, the pipeline network would cross Carlton's downtown area. However, as the construction work approached Carlton, a group of local residents organized a protest against the construction plan because of their concerns regarding the safety of the underground facility and pipelines, even though SNGC had obtained consent from all the related governmental agencies, as required by law. Because of the protest, SNGC had to stop its pipeline construction and was unable to extend its service networks to Screen Industrial Park as originally scheduled, and thus could not obtain new customers there. Despite SNGC's efforts to resolve the issue, the whole project was finally put aside and has not yet been resumed.

4.2 *The impact of issues on organizational KM initiatives*

When the first group of protestors appeared, SNGC's employees focused on preventing the action from escalating. However, while the staff concentrated on handling the protest, their internal support functions were not adjusted as fast as they did. This can be considered from the three primary KM focuses of process, people, and technology, with the fundamental aim to keep the interrelationships between these focuses balanced in order to achieve effective KM (Massey *et al.*, 2002).

4.2.1 Process. The occurrence of the protest inevitably generated extra task demands for SNGC's employees, such as a surge in phone calls from key stockholders of SNGC, concerned inquiries from people who were against or disturbed by SNGC's construction, frequent visits from media reporters, and the reexamination of the original project plans. Consequently, staff had relatively little time and energy to keep up their normal KM activities. For example, SNGC had to temporarily stop holding employee training programs to give the managers who were in charge of organizing the programs more time to handle tasks related to the protest. Additionally, the part-time employees who were initially recruited to input all the work logs and documents into SNGC's information systems for preservation and distribution were pulled out of their regular assignments to help handle the huge number of phone calls and personal inquiries related to the protest. Consequently, information and knowledge was easily lost as a result of the lack of effective capturing and distribution processes. As the manager of SNGC's Department of Construction and Engineering (C&E) stated:

I usually tried to keep records on every job I participated in for the purpose of future reference [...] but at that time I just could not do it so thoroughly anymore, since I was overwhelmed by the things I needed to deal with because of the protest [...] Sometimes I knew we had it on file, but I just could not find it or find anyone who would know about it.

Consequently, the following position is presented:

P1. The occurrence of an issue often leads to the emergence of extra task demands for the staff of an organization, and makes it more difficult for them to sustain the momentum of regular KM practices, which, in turn, makes it more difficult to learn the knowledge needed to effectively plan for and respond to certain problems.

4.2.2 People. First, with intent to guide the efforts of all SNGC personnel to resolve the protest swiftly and smoothly, the CEO organized a special team of six key SNGC senior staff, drawn from all across the organization, particularly the C&E Department and the Department of Sales and Public Relations (S&PR). The manager of SNGC's C&E Department was appointed to lead the team. Although the consensus of resolving the protest issue quickly and amicably was reached among the team members, they faced a challenge in that most of the members considered themselves as having a supporting role in this operation, and thus everyone was expected others to take the lead and responsibility and decide what to do. Consequently, this team turned out to be neither effective nor efficient, since the members spent more time discussing who should do what, rather than that actually working to resolve the issue. This situation was further worsened due to the Chinese employees' typical authoritarian mindset, and a desire to protect their own prestige that suppressed their willingness to actively share knowledge (Hsu, 2006). The manager of the C&E Department and his staff thus ended up doing most of the work

including matters that were supposed to be handled by the S&PR department, such as negotiating with the leaders of the protesters and communicating with government agencies, with very limited personal and intellectual assistance from the staff in other departments.

SNGC's shareholders and potential customers in the Screen Industrial Park urged the company to resolve the issue, and the manager of the C&E Department and his team became more anxious and stressed. However, given the fact that they had neither strong support from colleagues in other departments nor robust connections to the people in Spring County who might have been able to offer useful suggestions, their options were quite limited. Consequently, they undertook all the actions they could without considering the key stakeholders and the shifts in power among different groups of stakeholders, which is considered a major drawback from the stakeholder theory perspective (Nasi *et al.*, 1997). The consequence was that SNGC's staff spent much time addressing the superficial safety concerns of the protestors, while the deeper and more important concerns of the local politicians who had organized the protest for publicity purposes in an upcoming election were never identified or addressed until the situation was out of SNGC's control. These politicians and their supporters then continued to fight against SNGC's construction after the election, in order to keep their promises to voters. Based on the discussion above, the following proposition is presented:

- P2. When there is time pressure in situations with a high level of ambiguity and uncertainty, such as during the development of an issue, decision makers tend to accept more accessible knowledge in order to make critical decisions, without verifying its accuracy or appropriateness, which may lead to undesirable consequences.

4.2.3 Technology. With regard to the use of technology for KM, SNGC had an information system which was implemented for keeping and organizing the records of all the business activities its employees performed, based on a set of predetermined rules. However, there were virtually no technology-based KM tools available for SNGC's employees to process the information and knowledge related to the protest issue. For example, in addition to the problems related to the process of KM discussed previously, the difficulties that SNGC's employees had in keeping records of the information related to the protest were further exacerbated due to the fact that the company's IT capabilities lagged the users' needs during the protest event. The IT division simply did not have enough time and resources to develop data organization rules, user-friendly interfaces and structured databases to enable employees to efficiently input, organize, store, and retrieve the data related to the protest event through the SNGC's information system. Additionally, because the end-users of these systems were overwhelmed by the tasks caused by the protest, they did not have time to provide IT staff with useful user comments, which are considered critical for a successful IT development project.

Consequently, SNGC's employees mostly had to keep their records in Microsoft Word files, and saved these in a shared drive to provide their colleagues with access to the information. This lag in developing appropriate IT functions to support KM caused considerable inconvenience to SNGC's employees, and, in turn, further discouraged them from performing KM practices. Additionally, due to the lack of data organization rules and IT-based search functions, files created by one individual were difficult for others to locate without specific instructions, and thus information and knowledge loss

occurred very frequently. This made it more difficult for SNGC's employees to acquire the quality knowledge necessary to make appropriate decisions in response to their issue.

Strictly speaking, the potential means to resolve SNGC's issue were unclear largely because of the issue's effect on process and people, and less so due to technology. This is evidenced by the fact that, as discussed above, the problem of the lag in developing IT for supporting KM practices during the protest had its roots in the imbalance of process and people from a KM perspective, and this, in turn, further contributed to the situation depicted in the two earlier propositions. Consequently, the following proposition is presented:

- P3. The imbalance between KM process and people during the progression of an issue will result in the ineffective use of technology, which, in turn, causes further problems that contribute to the KM obstacles with regard to both process and people.

4.3 KM orientation

In general, the KM practices of organizations seek to enhance individual and/or collective learning and sharing in a broad sense in order to improve overall organizational capabilities. When there are no urgent demands or specific directions to pursue improvement, organizations tend to place relatively less emphasis on KM practices compared to other business functions, and thus KM is performed in a relatively more passive manner. In the case of SNGC, the focus of its KM practices during ordinary time was the preservation, distribution, and use of the internal knowledge residing in the minds of its employees or in various media, including documentation and operating protocols. To achieve these KM purposes, various activities were constantly performed, including internal employee training programs, the development/adjustment of standard operating procedures, and documentation of the contexts of the work done. However, SNGC's top executives did not take the lead and set an example in pursuing KM, and thus no measures were taken to facilitate and encourage such efforts during the protest. Consequently, SNGC's employees were not motivated to actively engage in more appropriate KM activities. Additionally, although IT-enabled KM functions, such as SNGC's information system for preserving and distributing knowledge, was the major enabler of KM implementation (Alavi and Leidner, 1999), this system was not continuously improved in a planned manner to update and improve KM practices. The company's IT division was undervalued, since it was only designated as a sub-division of SNGC's Department of General Management, rather than a fully functional and independent department.

However, an issue often requires the resolution of a specific set of problems, and thus generates specific knowledge needs which may require the application of different KM approaches. For example, at the beginning of this event, SNGC's employees were surprised and unsure how to respond to the protest. In order to coordinate the efforts of employees, SNGC's CEO actively intervened to develop unified operational tactics, and then clearly assigned tasks to all personnel. Consequently, employees became more confident and more motivated to continue dealing with the issue. Additionally, in order to assist employees acquire the knowledge and resources they needed, the CEO initiated a reach-out plan in which middle- and upper-management staff were assigned to contact specific groups of stakeholders who might be helpful in resolving the protest, including governmental agencies, business partners, and local politicians. Furthermore, although

SNGC's IT division did not get promoted to a first-level independent department of SNGC, the director of the IT division was granted access to the executive meeting to participate in the decision-making processes, particularly those related to the decisions about ensuring sustainable access to crucial information and knowledge through SNGC's information system. The director of the IT division was also asked to report directly to SNGC's vice president regarding work progress or requests for resources.

With reference to Zack's (1999) KM framework, the transition of KM orientation of SNGC as a result of the occurrence of the protest issue is summarized in Table I. Based on the discussion above, the following propositions are presented:

- P4. The persistent support and commitment of top executives with regard to KM practices has a positive influence on sustaining the momentum and enhancing the effectiveness of these practices when handling an issue.
- P5. Organizations tend to adopt relatively more aggressive KM approaches than usual in response to an issue in order to identify and acquire the knowledge needed from external knowledge sources to resolve the situation.

Profile of SNGC's KM practice	Ordinary time	During the impact of an issue	Aftermath of an issue
Examples indicating KM attitude	"We got the job done by mostly taking advantage of our internal expertise, such as the employees' experiences and the documents and reports from the previous investment projects." – The manager of SNGC's C&E Department "We held many meetings with one another in order to determine what to do [...]" – The Director of the Board	"We worked closely with our connections trying to find a way to persuade the protestors to change their minds." – The manager of SNGC's S&PR department "We consulted almost everyone we could reach, such as our former employees, business partners in the local area, and our connections and friends who were familiar with the political and business context [...]" the bottom line was to figure out what was really going on there." – The CEO of SNGC	"We tried to figure out what happened, why it happened, and how the problem was solved by taking advantage of information and expertise from all kinds of sources through social connections and interactions." – The CEO of SNGC "We collected and organized the materials related to this project from various sources for experience transfer purposes." – The manager of SNGC's C&E Department
Main knowledge source	Internal	Both internal and external	Both internal and external
Main tactic used	Knowledge exploitation for reuse purposes	Knowledge exploitation and distribution for reuse purposes	Knowledge exploitation preservation for reuse purposes
Overall KM orientation	Internal exploiter	Unbounded exploiter	Unbounded exploiter
Degree of aggressiveness	Low	Medium	Medium

Table I.
Transition of SNGC's KM orientation

Finally, it was found that the persistent support and commitment with regard to active KM practices from top executives was crucial in helping SNGC's employees establish strong links and thus devote themselves to developing and maintaining close relationships with external stakeholders who possessed critical knowledge, including business partners, former employees, staff of governmental agencies, and well-respected local and national figures. The social networks of SNGC's employees allowed them to receive assistance indirectly from their personal and business connections through knowledge sharing and feedback on their operations. Additionally, these connections provided assistance directly by becoming personally involved in resolving the protest. As the CEO of SNGC recalled:

We did ask some other local leaders, mostly the Spring County councilors or the political representatives of local communities in Carlton to talk to those protestors in order to come up with some agreement that could allow us to continue our construction.

Although eventually SNGC's construction could not be resumed, since the protest was not completely stopped, SNGC's efforts, which were facilitated by acquiring and utilizing knowledge from external experts, did significantly reduce the number of protesters. Consequently, the following proposition is presented:

P6. The more aggressive the KM approaches adopted by an organization are, the more likely an organization can acquire the knowledge needed for dealing with an issue, and, in turn, the more likely that the issue can be resolved successfully.

5. Conclusion

5.1 Implications

This research was motivated by the observation that very few studies have been conducted to specifically address the issue of the use of KM concepts in the context of issue management, and thus organizations' ability to develop appropriate and viable means to manage critical knowledge in such times is limited. By investigating the case of a protest against the construction of a gas pipeline network by an energy company, this study examines whether and how the decisions made in an organization when handling an issue impact those in its KM agenda and behaviors, and vice versa, and summarizes the primary research findings in six theoretical propositions. Consequently, this study provides insights into the dynamics of the implementation of KM in the context of issue management, and enables future researchers to develop a programmed body of research in order to further expand our understanding of the use of KM at such times.

Additionally, the propositions developed in this study show how and why the occurrence and evolution of an issue may result in an imbalance of an organization's KM in terms of process, people, and technology, and how the organization can respond to counteract the negative effects of the issue. Consequently, the findings of this study can aid organizations with regard to the task of planning their KM implementation with reference to their business contexts during specific issues, in order to resolve such events in an effective and efficient manner.

5.2 Limitations and directions for future research

As with all studies, this study has its limitations. For example, given the fact that the research findings were generated based on a single case study, the generalizability of the findings is questionable from the perspective of quantitative researchers.

However, it is believed that this study has contributed to the understanding of the use of KM in the context of issue management by achieving analytic generalization, which refers to the capability to enable others to understand and conceptualize similar problems and social contexts by generalizing the proposed theory through the use of their own experience, as should be possible with any good case study research project (Yin, 2003). Nevertheless, since more cases can strengthen the findings even further, future research that aims to address critical phenomena related to the use of KM in response to issues should be conducted.

Additionally, it is generally agreed that organizations in knowledge-intensive environments would have better performance compared to their competitors if they use relatively aggressive knowledge strategies (Choi and Lee, 2003; Zack, 1999). The same argument is made in this study from an issue management perspective with reference to a case which is considered a failure, not only because that the issue remained unresolved, but also because of the obviously flawed operations of the company in response to the issue from the perspectives of both KM and issue management. Consequently, the arguments presented in this study may require more rigorous support in order to further strengthen their validity, as the effects of aggressive KM practices on organizational performance in terms of resolving an issue are somewhat unclear. In order to eliminate this deficiency, future research projects which adopt a similar research design to examine the dynamics of organizations' KM agendas with reference to cases in which the issues investigated are resolved successfully are encouraged.

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