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EXPLORING THE INFLUENCE OF COLLECTIVENESS ON VALUE CREATION ADOPTION IN AN INFORMATION TECHNOLOGY ORGANIZATION

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Abstract

The objective of this empirical study is to explore the influence of socio-cultural factors, with a focus on collectiveness, on knowledge-value creation practices in a Thai information technology organization. The research adopts an interpretive stance and employs a case study approach involving multiple data collection methods. The paper is based on one author's personal expertise and close involvement in the selected case study organization. Using a grounded theory research approach, the study indicates that while collectiveness is overall perceived as a positive Thai cultural feature, it critically influences (1) the social network ties and relationship between employees within and across teams, (2) the resulting level of trust, and (3) the ability to share and create knowledge effectively in the organizational socio-cultural environment. The study is limited to a Thai organization, but can be generalized to other organizations that exhibit similar characteristics. This empirical study provides a foundation to further the research and the validation of the summary of themes that emerged from this empirical study.

Keywords

Value creation, collectiveness, knowledge management, interpretive case study, grounded theory, Thailand

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1 INTRODUCTION

A knowledge-based perspective of the organization has emerged in the strategic management literature (Alavi and Leidner 2001; Nonaka and Takeuchi 1995). Organizational knowledge is recognized as a key resource and a variety of perspectives suggest that the ability to marshal and deploy knowledge dispersed across the organization is an important source of organizational advantage (Teece 1998; Tsai and Ghoshal 1998). Furthermore, it is widely acknowledged that one of the key sustainable advantages that a firm can have comes from what it collectively knows, how efficiently it uses what it knows, and how readily it acquires and uses new knowledge (Davenport and Prusak 1998). Traditional organizations are beginning to comprehend that knowledge and its interorganizational management, as well as individual and organizational capability building, are becoming crucial factors for gaining and sustaining competitive advantages (Preiss et al. 1996). The gaining popularity of knowledge management (KM) has been reinforced by the quest for innovation and value creation. The positive relationship between knowledge management and value creation has been discussed extensively in the literature (Chase 1997; Despres and Chauvel 1999; Gebert et al. 2003; Liebowitz and Suen 2000). Davenport et al. (1998) argue that value creation takes place and is facilitated by (1) creating knowledge repositories, (2) improving knowledge access, (3) enhancing cultural support for knowledge use, and (4) managing knowledge as an asset (Davenport et al. 1998). In this context, KM is perceived as a framework for designing an organization's goals, structures, and processes so that the organization can use what it knows to learn and create value for its customers and community (Choo 1999).

The scope and definition of KM has evolved over the years. At present, it is perceived that there are three generations of KM (Vorakulpipat and Rezgui 2008). The first generation takes into account knowledge sharing or "supply-side KM," focusing on IT-driven KM (Koenig 2002; McElroy 1999). The second generation emphasizes knowledge creation or "demand-side KM" (McElroy 1999). The third generation tends to focus on value creation (Rezgui 2007; Vorakulpipat and Rezgui 2006a, 2007, 2008). Value creation is grounded in the appropriate combination of human networks, social capital, intellectual capital, and technology assets, facilitated by a culture of change. Value here is not understood in monetary terms, but rather as subjectively perceived desirable outcomes (such as willingness to share and create knowledge, social cohesion, collaboration, etc.). Therefore, value creation in this paper is defined as any process of creating knowledge value, as subjectively perceived by users, out of existing knowledge practices across an organization.

Value creation or knowledge-value creation has become an important ingredient to sustain competitiveness in developing countries (Wagner et al. 2003). Very few articles, unfortunately, have reported value creation implementations and strategies in developing countries. The latter includes China (Burrows et al. 2005), Malaysia (Wei et al. 2006), India (Chatzkel 2004), and sub-Saharan Africa (Okunoye 2002). These studies have identified several distinctive features, including varying levels of expertise to adapt and adopt technologies, distinctive socio-cultural features, and lack of availability of human and financial resources to nurture value creation practices (Okunoye 2002). A call has been made for further research to explore value creation practices in different organizational and cultural (regional, national, and international) contexts in developing economies.

Although technology plays an important role in the successful implementation of KM initiatives (Koenig 2002), a number of distinctive socio-cultural features such as collectiveness have an equally important role and influence (Chaidaroon 2004), in particular in the cultural context of developing countries. Collectiveness here may relate to collectivist culture and social relationship. People in a collectivist culture are “supposed to look after the interest of their ingroup and to have no other opinions and beliefs than the opinions and beliefs in their ingroup. ...The collectivist society is tightly integrated” (Hofstede 1983, p. 79).

Thailand is an example of a developing country where a number of distinctive cultural features have been identified, including collectiveness (Chaidaroon 2004). It therefore represents an interesting case to conduct a study on the influence of collectiveness on knowledge value creation practices within an organizational context. While value creation practices in Thailand have been reported later than in other countries in the region, several private and public organizations, in particular information technology or “high-tech” organizations, have already initiated ambitious KM programs and initiatives (Vorakulpipat and Rezgui 2006b). There is an interesting trend in the region to promote a competitive economy through technology and knowledge infused practices at a societal level. For example, the Ninth Malaysian Plan (2006-2010) has as one of its objectives to raise the capacity for knowledge and innovation, whereas the Ministry of Research and Technology (MRT) of Indonesia has identified information and communication technology (ICT) as a priority field to add value to its industries.

The aim of this paper is to explore the influence of collectiveness on value creation practices in a selected Thai IT organization. As such, the core research question is, how does collectiveness (as a distinctive characteristic) influence, and how is influenced by, knowledge-value creation practices in an organizational context? The paper makes two main contributions. First, drawing on the rich data of a Thai IT organization, it generates a grounded understanding of the influence of collectiveness on value creation. The grounded theory allows the identification of patterns in data; by analyzing these patterns, researchers can derive theory that is empirically valid (Glaser and Strauss 1967; Martin and Turner 1986). This is because “the theory-building process is so intimately tied with evidence that it is very likely that the resultant theory will be consistent with empirical observation” (Eisenhardt 1989, p. 547). While it is likely believed that building theory from a limited number of cases is susceptible to researchers’ preconceptions (Orlikowski 1993), Glaser and Strauss (1967) argue that the number of cases is not so crucial, and a single case can indicate a general conceptual category or property. The iterative comparison within the site, methods, evidence, and literature leads to unfreezing thinking and the potential to generate theory with less researcher bias than theory built from incremental studies (Eisenhardt 1989). Second, the paper proposes a summary of themes developed from the grounded analysis of gathered primary data evidence from the case study, using social capital and related literature.

The key audience for the paper is the KM and interpretive information systems research communities, with a particular focus on KM/IS adoption in developing countries. The authors wish to contribute to the interpretive case study literature, and that dealing with KM/IS adoption. Practitioners may find it useful to take into account the findings reported in this paper to implement and adopt value creation in their organization, while researchers may want to further research across different industries or international settings.

The paper is organized into six sections. Following this introduction, the paper presents related literature, and then the research methodology employed in this study, which involves a case study approach. The research results are then given, followed by the discussion. Finally, the conclusions are drawn.

2 RELATED RESEARCH

It has been highlighted that technology adaptations in developed countries occur continuously in response to misalignments, gradually leading to a successful alignment (Leonard-Barton 1988). This is in contrast to developing countries, which tend to rapidly adopt technology created by developed countries, often in an *ad hoc* way (Archibugi and Pietrobelli 2003). Developed countries concentrate more than 84 percent of the world's scientific and technological production (National Science Foundation 2002). Developing countries have only marginally increased their participation in this, which emphasizes the scientific and technological gaps that exist with the developed world. Also, in several of the information technology installations that were created and adapted for organizations in developing countries, local (regional and national) factors were not taken into account. This has resulted in outcomes that do not fit the needs of the direct beneficiaries in the developing nations (Cyamukungu 1996).

While the above is applicable to KM, the crucial issue might not relate only to technology but also include other factors, such as cultural-based resistance. "Technology, designed and produced in developed countries, is likely culturally-biased in favor of industrialized socio-cultural systems, technology transferred to developing countries meets cultural resistance" (Straub et al. 2001, p. 6). Moreover, it is reported that there is a significant gap in the understanding and maturity of KM between Asian developing companies and those in developed countries. This can be explained by the fact that American and European companies have had KM strategies and initiatives in place for over a decade, while Asian developing companies are still attempting to understand and apply the concept of KM (Yao et al. 2007).

In terms of culture, Chaidaroon (2004) indicates that collectiveness is a characteristic that distinguishes Thai culture and communication styles from the Western (developed countries) counterparts. Hofstede (1983) argues that developing or poor countries such as Thailand exhibit a strong sense of collectivism while developed or wealthy countries tend to be more individualist. Komin (1990) reports that Thai people placed more emphasis on social relationships (collectivist culture) as opposed to task achievements. Thai people generally believe that their work will be accomplished smoothly if their good relationship is maintained. Based on this evidence drawn from the literature, conducting an exploratory study in Thailand is beneficial to further research and understand the role and impact of collectiveness on value creation in different developing countries and cultural contexts.

In general, research on human and organizational aspects related to KM has focused on understanding the socialization and organizational dimension of KM (Becerra-Fernandez and Sabherwal 2001; Gold et al. 2001). The concept of social capital has recently been adopted within the discipline (Adler and Kwon 2002; Cohen and Prusak 2001; Huysman and Wulf 2006; Lesser 2000; Nahapiet and Ghoshal 1998), emphasizing

the role of trust and social cohesion within the organization (Vorakulpipat and Rezgui 2006a). Clearly, the higher the level of social capital, the more communities are stimulated to connect and share knowledge (Huysman and Wulf 2006).

3 RESEARCH APPROACH

The research aims at investigating the role of socio-cultural factors in the context of knowledge-value creation in a Thai IT organization. The authors thus needed to gain an in-depth understanding of value creation practices in the selected case study. Empirical studies that collect such data can be broadly classified as *interpretive case studies* (Walsham 1995). This type of approach has been selected since it aims to understand human thoughts and action in social and organizational contexts and to produce deep insights into IS phenomena (Klein and Myers 1999). However, there are significant differences of methodology and theory under the broad interpretive case studies. The remainder of this section is devoted to describing the specific approach adopted in the research and the reasons for the choices.

The research methodology is based on grounded theory (Glaser and Strauss 1967). This is motivated by the facts that (1) grounded theory “is an inductive, theory discovery methodology that allows the researcher to develop a theoretical account of the general features of a topic while simultaneously grounding the account in empirical observations or data” (Martin and Turner 1986, p. 141), (2) grounded theory facilitates “the generation of theories of process, sequence and change pertaining to organizations, positions and social interaction” (Glaser and Strauss 1967, p. 114), and (3) there are few guidelines for analyzing qualitative data (Miles and Huberman 1994) and it has been argued that grounded theory approaches are particularly well suited to dealing with the type of qualitative data gathered from interpretive field studies (Martin and Turner 1986; Oates 2005).

Site selection was guided by a technique of theoretical sampling (Strauss and Corbin 1998, p. 201): “data gathering driven by concepts derived from the evolving theory and based on the concept of making comparisons.” BETA (the name of the organization has been disguised), a Thai IT research service organization that conducts research in information technology, was selected as a case study for the investigation as the authors believe that BETA exhibits a KM-rich environment to address the research question. Also, the site selection depends on easy access to the case study. It is worth noting that one of the authors is not only employed by BETA in an IT department but had a close involvement and critical role in BETA in IS and KM implementation involving a diverse group of managers and employees for over a decade. Indeed, the researcher has, over the years, acquired substantial personal knowledge of the organization’s culture and work environment. Therefore, the organization welcomed the author to conduct this in-depth case study, and was willing to provide information openly and support this research. Also, because of his involvement and role in the organization, the researcher aimed to analyze the collected data in an interpretive way based on his own experience.

BETA was founded over 20 years ago. It employs more than 600 people, a majority of whom are highly educated and work in research and development production departments. For over a decade, BETA has acted as a research supplier to Thai industry.

Following the increasing demand for R&D, BETA has transformed itself from a supply-driven to a demand-driven organization. This demand-focused strategy has helped BETA address and meet the needs of Thai organizations more effectively. In the late 1990s, management initiated a large KM program. In the first stage, a collaborative system was deployed and adopted to help staff collaborate more effectively while promoting knowledge-friendly practices. Also, physical and virtual social spaces have been provided for sharing knowledge. Later, management deployed a knowledge repository system to encourage staff to codify tacit knowledge and experience into a reusable form. A number of incentives have been introduced, including monetary rewards and recognition to motivate people to share and create knowledge. While KM initiatives have been underpinned by IT, it was found that the organization was not successful in achieving the objectives of those initiatives and the overall results were less than desired. It may be perceived that a socio-culture feature like collectiveness in place has critically influenced the achievement of KM initiatives. For example, people preferred sharing tacit knowledge in social events to sharing and/or storing codified knowledge in the knowledge repository system provided. This results in the need for research on the influence of collectiveness in BETA.

In BETA, data were collected through a variety of methods: semi-structured interview, observation, and documentation. An interview guide was developed to collect critical qualitative data from all four “core” production (R&D) departments. The interview guide was designed to fit with the organization based on the researcher’s experience. The questions involved a number of areas (i.e., organization nature, teamwork and organization environment, information technology adoption, knowledge sharing and creation, and organizational change).

Before interviewing, the selected interviewees were encouraged to explain their knowledge background including their level of previous education, work experience, KM experience, etc. In this stage, the researcher was able to set the direction of the interview and select the questions to be asked. During the interview, selected questions in a number of areas were asked to capture their perception of value creation adoption.

Twelve top managers and key people from the production departments were subjectively selected as interviewees as they were perceived to have permission to provide critical (or sensitive) data and constructive comments. Tape recording was used for nine interviewees, while the others requested not to be recorded during the interview.

Besides collecting sensitive data from manager and key person perspectives, additional data from employees were captured in the mode of direct observation (Yin 2003) during the entire study. The researcher was provided an opportunity to observe the employees’ working styles, environments, and reactions. Moreover, as the researcher has been positioned in BETA for over a decade, he had a great chance to discuss informally some underlying issues with his colleagues and other employees. In addition, documentation about the organization was examined.

The data triangulation technique was chosen to analyze data collected from multiple sources (Yin 2003) since “it is particularly beneficial in theory generation as it provides multiple perspectives on an issue, supplies more information on emerging concepts, allows for cross-checking, and yields stronger substantiation of constructs” (Orlikowski 1993, p. 312). In this research, there were multiple realities that were interpreted by different viewpoints. Therefore, a broad variety of these have been made in the field study. The BETA case was supposed to illustrate differing viewpoints among employees,

managers, and the researcher. As an interpretive stance was adopted, the findings of this study would comprise the researcher's own interpretations and those of others (respondents: employees and managers) who were involved in the study. However, as only the researcher had control in the study, the work is ultimately presented from the researcher's perspective, a typical criticism of interpretive studies. Moreover, since the interpretive study may require sensitivity to possible biases and systematic distortions in the narratives collected from the participants (Klein and Myers 1999), the researcher might not take the informants' views at face value.

Finally, the process of data collection, coding, and analysis is iterative (Glaser and Strauss 1967). This iterative process only finishes when it becomes clear that further data no longer triggers new modifications to the data categories and emerging theory, that is, the research has reached "theoretical saturation" (Strauss and Corbin 1998). Eisenhardt (1989) notes that overlapping data analysis with data collection can allow researchers to take advantage of flexible data collection and make adjustments freely during the data collection process. In the research, this process of data collection, coding, and analysis was taken to validate that the researcher had captured the perspectives of the informants on the topic. Pattern coding techniques of qualitative analysis (Miles and Huberman 1994) were used to summarize segments of the data from interview transcripts and observation notes, and then to determine categories or pattern codes.

4 RESEARCH RESULTS

A number of categories or pattern codes emerged from the data analysis using pattern coding techniques of qualitative analysis. These are information and communication technology (ICT), team working, structure and culture, and knowledge sharing. The pattern coding here is processed iteratively. These categories are discussed below.

4.1 Information and Communication Technology

Analysis of the interview transcripts suggests that ICTs help address personal barriers as employees feel more at ease when communicating via electronic means as opposed to face-to-face in social or work contexts. Moreover, e-mail plays an important role and seems to be preferred to telephone and face-to-face interactions, in particular when these involve interactions between employees and their senior staff.

The interviewees highlight that communication beyond time and space supported by technology (Internet, intranet, extranet) improves work performance as employees can work and learn "any time/any where." Intranets and extranets are highly valued as they promote flexible working, including access to document repositories and knowledge, while minimizing physical social interactions between employees. However, it is observed that this can have the adverse effect of hindering social cohesion between employees, which is essential to develop trust and sustained relationships. The research reveals that this can also result in a number of social disadvantages, including

- lack of social-oriented communication that is essential to develop trust among employees

- high task orientation that results in effectiveness without efficiency
- inappropriate time management between social life and work

These disadvantages are also caused by the attempt to replace traditional communication (such as the face-to-face method) with virtual methods underpinned by technology. It is very difficult to change an organization's culture. It is suggested that this failure can be solved by adapting the (ICT) strategy to the (Thai) culture instead of the (Thai) culture to the (ICT) strategy. That is, technology should be adopted as a tool to enhance the overall organizational processes while retaining the current human networks and social-oriented communications. For example, the primary purpose in adopting an e-mail system is to reduce delivery time and prevent delays or document loss in transfer (such as for sending files and announcements), rather than to replace a formal meeting or face-to-face interaction. It is observed that staff should not be forced to use virtual communication supported by technology if social-oriented communication is needed.

4.2 Team Working

Gathered data suggest that tasks and R&D in BETA are achieved through teams formed by the management, and this emerges as the preferred mode of working across the organization. Hence, strong social relationships among employees are critical to promote effective working. It has been reported that bureaucratic (hierarchical) organizational structure is perceived to inhibit positive social relationships among employees, in particular when teams involve members at various levels of the organizational structure. The interviewees have reported that a number of socio-emotional factors, including shyness (not speaking up) and seniority, inhibit teamwork effectiveness as employees usually believe that they should act in a receiver role in their team and should not elaborate and argue their own ideas against those of older or senior staff. Some respondents suggest that a more participative culture should underpin teamwork to gradually overcome the overall bureaucratic environment that characterizes work at BETA. Promoting appropriate teamwork environment and atmosphere help staff reduce their shyness and fears by encouraging them to contribute effectively through constructive comments to managers or team leaders. One interviewee states that shyness may make employees miss an opportunity to sustain ties with others:

When we've got some guests wanting to visit our offices, our colleagues tend to be shy and nervous to meet them. The problem is that they try to avoid discussing with them and present our work to them. I recognize that this is a Thai behavior, but it would be better if they could get to socialize and know others. Keeping up ties with significant people who visit us is always good.

4.3 Structure and Culture

It is observed that the dominant bureaucratic (hierarchical) organizational structure within BETA may inhibit effective communication and employees' participation and contribution, also leading to personal barriers. This is reflected in existing working

procedures (e.g., reporting layers) and may generate conflicting corporate cultures. Although the hierarchical structure and culture in place is perceived to help increase trust and respect for senior staff, it inhibits self-development as this amplifies employees' personal barriers. One respondent confirmed this:

The ideas are always finalized by only senior members. Young members usually keep quiet, as they tend to be concerned about, and fear, the negative impact of criticizing ideas expressed by older members.

Nevertheless, the respondents perceive that this bureaucratic structure is widely accepted in Thai organizations, and it is a non-changeable organizational feature. Despite this, they feel that promoting participation within a hierarchical organization can improve a sense of collectiveness and help remove personal barriers.

4.4 Knowledge Sharing

The respondents perceive that sharing knowledge by informal or traditional face-to-face interaction is preferred to virtual means supported by technology (such as a web-based discussion forum or a knowledge repository system) despite acknowledged personal barriers. It has been reported that collective knowledge sharing in informal (facet-to-face) contexts, such as discussion forums and coffee breaks, is highly valued as this method can break personal barriers between employees and management by (1) establishing stronger relationships to develop trust among them, and (2) practicing and improving their presentation skills to gain confidence. One interviewee clearly explains that gaining confidence to remove personal barriers should be addressed before sharing knowledge in a team.

Firstly our objective is not knowledge sharing. We just want to practice their [employees'] presentation skills to reduce shyness and gain self-confidence. I'm quite sure they have good knowledge of their work, but this has always been difficult to share with others. They need to practice how to speak confidently in public and make the audiences understand them.

On the other hand, virtual contexts also have been also developed to break personal barriers, as participants do not need to identify themselves and thus express their facial emotion. While this method seems promising, some interviewees believe that it is too informal because facial emotions cannot be expressed through this channel, as it is very important in formal interactions to avoid misunderstanding during communication. One manager gives an example about a preference for face-to-face interaction and mistrust of virtual communication:

I prefer to meet my colleagues in person. Even when I send them an e-mail, I must go to see them suddenly to confirm receipt of my e-mail—"Have you received my e-mail?"—then I continue to talk with them physically.

Also, the evidence shows an example about the failure of the virtual method, gathered from the observation:

One of help desk staff received a complaint e-mail from our executive. He spent several hours thinking about the reply message that would satisfy the executive. He then asked his colleagues to help him reply. Finally, an e-mail was sent at the end of the day. That is, he and his colleagues spent the whole day just to answer one e-mail. However, the executive replied angrily to the e-mail because of the unsatisfactory answer and, especially, the late reply.

Another example of the failure of the virtual method and the success of the traditional method, gathered from observation, is a case of an interaction between an employee and a manager through a help desk system (a web board for end-users to report technical errors and for help desk staff to respond to the incidents):

One senior manager reported a technical error in a help desk system. Once one of the help desk staff received the report, he answered immediately by typing the results in the system. Later, the manager raised a new question because the answer was still unclear. The help desk staff member answered again. However, the manager was not satisfied with the answers and asked again. The conversation through the system continued for several days. The manager became upset, and the help desk staff member was worried because it wasted time. Then I [the participant] asked the help desk staff, "Why don't you go to see her in person and talk?" The help desk staff member was surprised with the overlooked, easy and promising solution. The help desk staff member was happy for a while, and then became unhappy suddenly. The help desk staff member said, "But our boss doesn't like this old-fashioned method....It is a non-IT solution."

5 DISCUSSION

As grounded theory facilitates "the generation of theories of process, sequence and change pertaining to organizations, positions and social interaction" (Glaser and Strauss 1967, p. 114), it is essential to base the discussion on existing relevant theories. This discussion will be based on social capital theory. Nahapiet and Ghoshal (1998) suggest that social capital should be considered in terms of three dimensions. First, the structural dimension refers to opportunity to connect with each other. Second, the relational dimension refers to the character of the connection between individuals and motivation to share knowledge. This is best characterized through trust, norms, obligation, and respect. Third, the cognitive dimension refers to ability to cognitively connect with each other in order to understand what the other is referring to when communicating and sharing knowledge. The discussion of collectiveness elaborates on how collectiveness is (1) supporting employees to work in teams, (2) impacting on trust between them, and (3) promoting value creation. Thus, this section will involve the three dimensions of structural opportunity, relational motivation, and cognitive ability.

5.1 Structural Dimension

The structure dimension of social capital focuses mainly on the density of networks and on bridging structural holes (Burt 1992; Wasserman and Faust 1994). Studying social networks would reveal how collectiveness is supporting team formation in BETA.

The results show that BETA clearly supports employees' opportunity to work in a team rather than to work individually. However, it is observed that a team is generally formed by management; individuals are not allowed to form a team freely. Since a team is established by people who are not involved in it (management), the team members may not have close relationships with one another, especially those who are from different departments and sometimes other organizations. That is, collectivist or participatory culture is needed in a team to help create network ties.

Therefore, the organization's knowledge values must be created through the network of relationships possessed by people in collectivist cultures. As also reported in Thanasankit and Corbitt (2000), Thai society constructs its reality as group or social interests rather than individual interests. Strong social relationships and collectiveness are perceived as a critical factor to create more opportunities for team members to participate in problem solving and decision making, and offer a range of different skills, abilities, knowledge, and experience to ensure that creative ideas are supported. Also, as highlighted in Nahapiet and Ghoshal, social capital is defined as the sum of the actual and potential resources embedded within, and derived from, the social network controlled by an individual or social unit; social capital also plays an important role as an aid to adaptive efficiency and to creativity and learning. It facilitates cooperative behavior, thereby encouraging the development of new forms of association and innovative organization (Fukuyama 1995; Jacobs 1965; Putnam 1993).

As outlined in Rezgui (2007), a knowledge-based organization needs all of its employees to share a culture that promotes the virtues of knowledge acquisition and sharing, requiring a number of essential attributes. These attributes are perceived to help create an opportunity for knowledge sharing and creation in BETA, including

- A culture that recognizes tacit knowledge and social networks, resulting in the promotion of open dialogue between staff, allowing them to develop social links and share understandings. BETA has valued sharing tacit knowledge in informal contexts, such as discussion forums and coffee breaks. This method is perceived to (1) break down barriers between employees and management, (2) establish stronger relationships among them, (3) allow employees to reduce personal barriers and gain confidence, and (4) practice and improve their presentation skills.
- The support of communities of practice where members continuously increase their understandings of their collective tasks. The results show that BETA has provided physical and virtual spaces to support communities of practice such as web-based discussion forum, resulting in efficiency in obtaining both tacit and explicit knowledge, and good connections between employees.

5.2 Relational Dimension

The relational dimension here is based on socially attributed characteristics of the connection between individuals, such as trust. Its aim is to discuss how collectiveness is impacting on trust between people. The results show that team collaboration through face-to-face communication such as formal training creates stronger social relationships and promotes trust, while these are difficult to establish in virtual contexts due to the lack of emotional expressions. Therefore, team members in BETA are aware of the greater societal acceptance of face-to-face rather than virtual interaction. Based on Thai culture, virtual communication such as e-mail may form bridges between people (e.g., across different sections or locations) but it does not create bonds (such as the case of the help desk staff member and the manager). Indirect communication strategies sometimes create a communication gap and misunderstanding during interactions, which is seen as a very well liked culture but not so well trusted, respected, or admired, even when compared with other Asian cultures from the Westerner's perspective (Hendon 2001).

As such, the research acknowledges the pivotal and strategic role that human networks play in developing trust in the particular context of the collective characteristic of Thai culture, as reported in Chaidaroon (2004). This has resulted in increased awareness, knowledge quality, and business intelligence, which have in turn triggered a value-added dimension that did not exist prior to initiating the change processes. Human networks are facilitated and nurtured by providing informal forums that can be assimilated into communities of practice. These are complemented with virtual spaces to share knowledge (including sensitive information) protected by a role access control system. The collective characteristic of Thai society is exemplified by the dimension given to team working. However, it has been shown that human networks can only be effective if the social conditions that underpin collaboration are met (including trust). This emphasizes the role that social capital plays in creating organizational value underpinned by strong human networks. A participatory culture helps develop trust, respect, and understanding for others at different levels in BETA.

Clearly, a culture of confidence and trust in which people are willing to communicate is perceived to initiate value creation. The results confirm the employees' perception that sharing knowledge through face-to-face interactions creates stronger social relationships and promotes trust, while these are difficult to establish in virtual contexts, as the expression of emotions is difficult. There are concerns about mistrust and confidentiality in the authentication and authorization features of the virtual environments, as also reported in Rezgui (2007).

5.3 Cognitive Dimension

The cognitive dimension here refers to the ability of human actors to cognitively connect with each other to share and create knowledge in both physical and virtual contexts. The discussion, therefore, will correspond to analysis of how collectiveness is promoting value creation. The evidence shows that formal and informal communication, through physical human collaborations such as formal training and meetings, is perceived to be effective in promoting value creation including knowledge sharing and creation.

Also, most employees in BETA express a preference for sharing tacit knowledge and experience through face-to-face interaction. They prefer learning via exchanging their experiences within social contexts to individual learning from documentation. However, management perceives that tacit knowledge gathered from people collaboration should be converted into explicit knowledge in order to store in a shared database, thus a knowledge repository system has been deployed in BETA. The knowledge repository system is used to store best practices and failures in the form of documentation, created during collaboration such as informal forums and training. The system also provides great value for the organization, in particular in the context of staff loss. This strategy encourages the learning of lessons from failure as well as success.

In terms of socio-technical perspectives, BETA shows concern about the lack of social-oriented communication and social events caused by the tendency to completely rely on computer technology, which results in people feeling that they are “stuck” in front of their computers. This perception leads to KM fallacies or traps that directly influence the perceived functionality of IT applications for the support of KM initiatives (Huysman and de Wit 2002). As reported in Huysman and Wulf (2006), these KM fallacies relate to the tendency of organizations to concentrate too much on the IT role supporting value creation practices, especially knowledge sharing, resulting in the “IT trap.” It is important to recognize that IT is not independent from the social environment, as it is not the technology itself, but the way people use it that determines the role of IT in supporting value creation practices (Huysman and Wulf 2006). Therefore, the organization’s success with the use of IT will not depend on IT skills, but the appropriate social context that can benefit from electronic communication technology (Zack and McKenny 2000). It is suggested that information systems aimed at value creation need to maintain the integrity of the social communities in which knowledge is embedded (Boland and Tenkasi 1995) in order to avoid the IT trap. This requires the use of socially embedded technologies or collaborative system, influenced by the belief structures (perceived ease-of-use and perceived usefulness) of TAM (Davis 1989). In the case study, collaboration through virtual communication is highly valued overall, and the functionality of options such as the discussion forum has been described as important in nurturing knowledge sharing within a social context, as confirmed in related literature (Ellis et al. 1991; Poltrock and Grudin 1995). Clearly, in BETA, this socio-technical perspective can be perceived as a vital tool in bridging the gap between the social context and the use of IT, and also promoting value creation. Social and technical aspects must be blended successfully to produce social capital.

5.4 Initial Theory Generation

The analysis of the case study for this research reveals how collectiveness influences value creation in a Thai organization. While, the discussion portrays collectiveness as essential, it has drawn a number of interesting findings. For example,

- IT is perceived to help gain confidence and break personal barriers, but it may not help develop trust and sustained social relationship among people, and may not be suitable in a bureaucratic organizational structure. Instead, promoting participation can improve a sense of collectiveness and help remove personal barriers.

- Virtual communication may form bridges between people but it does not create bonds.
- The use of IT can have the adverse effect of hindering social cohesion between employees and developing trust and sustained relationships.
- Overall, a socio-technical perspective should not be overlooked in collectivist culture. This helps bridge the gap between the social context and the use of IT and promotes value creation.

However, the discussion also opens up areas where collectiveness is very much subject to interpretation. The fact that it is perceived as difficult to change an organizational culture in Thailand does not necessarily equate with negativity. Some perceptions are accepted as a key and non-changeable feature of Thai culture. People in the organization prefer to preserve their culture (e.g., bureaucratic structure) regardless of the impact on value creation.

Using the concept of social capital, the study characterizes Thai people’s experience with value creation. A summary of themes including variables of the influence of collectiveness on value creation practices (Table 1) conceptualizes the thinking presented in this study in the general form, using three perspectives (technology, organization, and people) divided into six attributes (technology, organizational structure, change process, human network, social capital, and knowledge sharing and creation ability), analyzed from the generated pattern codes and related discussion.

First, the variable in the technology perspective refers to the level of influence of adopted technology in promoting a sense of collectiveness. Second, the variables in the organization perspective (organizational structure and change process attributes) refer to the level of the role of organizational issues, including organizational structure and change, in addressing collectiveness. Finally, the variables in the people perspective (human network, social capital, and knowledge sharing and creation ability attributes) refer to the level of the role of social networking, social capital, knowledge sharing and

Table 1. Summary of Themes Including Variables of the Influence of Collectiveness on Value Creation Practices

Perspectives	Attributes	Collectiveness
Technology	Technology	Technology influence in promoting a sense of collectiveness
Organization	Organizational structure	Perceived role of organizational structure in nurturing collectiveness across individuals and teams
	Change Process	Perceived role of collectiveness in the adoption of organizational change
People	Human Network	Perceived role of human network in nurturing collectiveness
	Social Capital	Perceived role of social capital in enhancing a sense of collectiveness
	Knowledge Sharing and Creation Ability	Perceived influence of knowledge sharing and creation in addressing collectiveness

creation, and KM motivation in nurturing, enhancing, and addressing collectiveness. Each variable in the summary of themes helps researchers determine the level of value creation influence in each attribute and perspective. Practitioners may find it useful to take into account the levels measured by researchers to implement and adopt value creation in their organization. The recommended future research is detailed in the next section.

6 CONCLUSION

The research has investigated the influence of collectiveness on knowledge-value creation practices in BETA, a Thai organization. It demonstrates that an exploratory study on KM within a specific organization is far from being objective as the multiple realities associated with KM practices play out in various ways, resulting in the need for an interpretive case study to conduct the research. The use of the grounded theory approach has helped generate a set of insights, concepts, and interactions that address the critical organizational KM elements—elements from the cases in developing countries largely overlooked in the KM literature.

The summary of themes generated from the empirical findings suggests that collectiveness, a distinctive characteristic of Thai culture, critically influences, and is influenced by, a number of KM attributes in terms of technology, organization, and the people perspective. The research demonstrates how collectiveness influences, and is influenced by, the value creation adoption that people in BETA have experienced. The study is limited to a Thai organization, leading to the recommendations for further research. Validation of the theory, and extension or simplification of the variables, is suggested.

Further investigation in other Thai organizations is highly recommended to validate and test the summary of themes, and then attempt to generalize it to Thailand. Further studies in Thailand may take into account the following issues:

- **Validation:** The need for the validation of the theory developed in this research is essential to determine the level of value creation influence on variables in each attribute and perspective. The levels can be measured by survey questionnaire using a scale. Each variable is assumed to develop a number of questions. For example, a variable “Technology influence in promoting a sense of collectiveness” may involve many questions in relation to intention to use, perceived usefulness, voluntariness, client satisfaction, etc. Moreover, this further research aims to test whether the selected organization will represent the same culture as BETA, influencing or influenced by the value creation practices, and whether the collectiveness feature is representative of the whole country.
- **Extension or Simplification:** During an investigation, the variables in the theory could be extended or simplified if the researcher thinks they are subjectively fit for the case, depending on many factors such as duration of field study, organizational culture, the researcher’s experience, appropriation, etc. For example, three perspectives (technology, organization, and people) and six attributes (technology, organi-

zational structure, change process, human network, social capital, and knowledge sharing and creation ability) could be subjectively extended, where appropriate.

Besides collectiveness, further studies on different distinctive characteristics are important. Other distinctive cultural aspects such as shyness, seniority, power distance, conscientiousness, and masculinity/femininity appear in Thailand and some developing countries. It would be interesting to further the research on the influence of these aspects on value creation practices. In addition, further studies within the context of developing countries are highly recommended to manifest the status of value creation practices in these countries, to test the extent to which there is a positive or negative trend toward value creation awareness, and to investigate the need for the theory developed in this research. However, the extent to which richness of data can be captured about value creation practices within an unfamiliar organization by case study method remains unclear. Further studies may be conducted by using alternative research methodologies such as action research and ethnography.

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