Knowledge value perceptions in Thailand: an interpretive case study

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Abstract

The paper aims to explore the knowledge value creation capability and maturity of a high-tech organisation in Thailand. The research adopts an interpretive stance and employs a survey and a case study approach involving multiple data collection methods. The paper is based on one of the author’s personal expertise and involvement in the selected case study organisation for over a decade. The results indicate that (a) the selected organisation has demonstrated its readiness to migrate to a value creation culture underpinned by knowledge sharing and creation practices, (b) the distinctive collective characteristic of Thai culture engenders a strong human and social sense of community, which in turn promotes knowledge-friendly practices, and (c) a knowledge culture requires essential socio-organisational ingredients, including trust, confidence, motivation, continuous learning. This empirical study provides a foundation to further the research to: (a) explore the role of knowledge management systems in promoting value creation, and (b) investigate the key distinctive features of Thai culture which underpin and influence knowledge management perceptions and practices of Thai employees.

Keywords: Knowledge management, Value creation, Interpretive case study, Information Systems, Thailand

1. Introduction

The increasing popularity of knowledge management (KM) has been reinforced by the quest for innovation and value creation [1, 2]. Because of this, it is perceived that the future of KM tends to focus on value creation [3]. Value creation, as reported in Rezgui [4], is grounded in the appropriate combination of human networks [5], social capital [6], intellectual capital [7], and technology assets [8], facilitated by a culture of change [9]. In fact, the concept of Community of Practice (CoP) [5] was introduced as an effective social activity to share tacit knowledge. This had the effect of promoting and nurturing human networks which in turn motivate people to share and create knowledge. In this context, the social capital of an organisation emerges as an essential ingredient to help employees develop trust, respect, and understanding of others. Because of its (social capital) emphasis on collectivism and co-operation rather than individualism, distributed community members will be more inclined to connect and use
electronic networks when they are motivated to share knowledge [6]. KM environments may foster social capital by offering virtual spaces for interaction, providing the context and history of interaction, and offering a motivational element (e.g. reward) to encourage people to share knowledge with each other [6]. The intellectual capital of an organisation encompasses organisational learning, innovation, skills, competencies, expertise and capabilities [10]. Liebowitz and Suen [7] suggest a strong and positive relationship between the value creation capability and Intellectual Capital of an organisation, pointing to factors such as training, R&D investment, employee satisfaction, and relationships development. Focusing on technology, the majority of KM initiatives involve, to a lesser or greater degree, information technology (IT) [11]. Alavi and Leidner [8] suggest that technology, including knowledge management systems (KMS), is an essential asset to sustain value creation. The use of technology in the context of KM has traditionally focussed on three common applications: (a) the coding and sharing of best practices, (b) the creation of corporate knowledge directories, and (c) the creation of knowledge networks. Lastly, change management plays an increasingly important role in sustaining “leading edge” competitiveness for organisations in times of rapid change and increased competition [9, 12, 13], and the future has only two predictable features – ‘change and resistance to change’ and the very survival of organisations will depend upon their ability not only to adapt to, but also to master these challenges.

KM solutions, including environments supporting information exchange, knowledge sharing and integration, and virtual communities, present a high and promising potential for developing countries [14]. However, very few articles have reported KM implementations and strategies in third world/developing countries, including South East Asia. Harris [15] argues that ICT adoption and deployment in South East Asian developing countries (Thailand, Malaysia, Philippines) are much effective than other developing countries (e.g. Pakistan and Bangladesh). Thailand, perceived as a new Asian Tiger economy [16], is successfully transforming itself into a knowledge-based economy. This confirms the perceived value of knowledge in Thailand and its crucial role in promoting a knowledge-based economy.

The aims of the paper are to (a) investigate overall KM practices and (b) explore value creation capabilities in a Thai Hi-Tech organisation, covering technical, cultural, and organisational aspects. The paper is organised into five main sections. Following this introduction, the paper presents the research methodology employed in this study, which involves a survey and a case study approach. This is followed by a brief overview of KM practices trends in Thailand that have emerged from the survey. A description of the case study data collection procedures and results is then given. The results are then discussed in the context of the research. Finally, the paper is summarised and various conclusions are drawn.

2. Research methodology

The research context used for the investigation is a case study, BETA (a pseudonym), a Thai Hi-Tech Research and Development (R&D) organisation which conducts research in Information Technology. A case study approach is well suited to Information Systems research [17]. It is widely used in qualitative information systems studies and can be applied in positivism and
anti-positivism investigations [18, 19]. The case study aims to provide in-depth analysis of the selected organisation (BETA) for which KM is perceived as essential. The selected research units involve a number of knowledge-intensive production departments, which comprise several high-profile research teams. The two following research questions form the focus of the research:

- Have employees from BETA adopted a culture of knowledge sharing and creation across their organisation?
- What kind of perceived value is created out of existing knowledge practices across the organisation?

An interpretive stance is adopted as one of the researchers has worked in the organisation for over a decade. Indeed, the researcher has, over the years, acquired substantial personal knowledge of the organisation’s culture and work environment.

The case study involves the use of five instruments: survey questionnaires, interview, process mapping, direct observation, and documentation. These instruments are employed in sequence from conducting a statistically analysed case study survey questionnaire then following up with in-depth interviews, observation and process mapping to better understand and interpret the results [20-22]. Therefore, the case study employs a combination of methods embodying quantitative and qualitative paradigms [23, 24]. There are two main reasons for supplementing quantitative with qualitative data: (a) to develop contextual richness that is valuable in model building, and (b) to improve internal validity and interpretation of quantitative findings through triangulation [25]. Data triangulation is chosen to analyse data collected from multiple sources, and corroborate qualitative with quantitative results [26].

### 3. Survey of Thai knowledge practices: key findings

Prior to conducting a case study approach, the researchers have surveyed 28 organisations, selected using the stratified random sampling technique, to build an overall understanding of KM practices in Thailand [27]. The main findings of the survey indicate that Thai organisations use information technology as a strategic instrument to address their communication and collaboration needs. Groupware has been identified as a common technology used by a limited number of leading organisations to create shared workplaces to support team work over space and time, and facilitate knowledge sharing. The results suggest that traditional face-to-face methods of interaction, such as formal and informal meetings, are essential in sharing experiences and tacit knowledge. These are complemented with virtual means through groupware functions, including e-mail, and telephone. Thai people expect reward for sharing and creating knowledge. While there is a distinct preference for monetary reward, Thai employees do also value recognition and praise. Overall, most Thai organisations attempt to increase their employees’ awareness of the importance of knowledge, and various means are employed to motivate them to share, create, and use knowledge. The survey indicates a strong willingness of Thai organisations to adopt knowledge-friendly practices and become part of
knowledge networks. From a socio-cultural perspective, the survey has identified the distinctive collective nature of Thai society underpinned by trust and strong social relationships. Overall, the following key findings have emerged: (a) there is an established knowledge sharing culture supported by a corporate KM strategy, amongst high-tech organisations, as well as a preparedness for change to migrate to a knowledge creation culture; (b) a number of Thai international organisations exhibit ad-hoc knowledge sharing practices as well as a growing awareness about the value of knowledge sharing and what can be termed as intangible assets; (c) there is a clear lack of any knowledge-oriented practice within ministry and departments of public sectors.

4. Case study data collection procedures and results

BETA was founded over 20 years ago. It employs more than 600 people, a majority of which is highly educated and works in R&D production departments. It has initially acted as a research supplier to Thai industry for over a decade. Following an increasing demand for R&D, BETA has transformed itself from a supply-driven to a demand-driven organisation. This demand-focused strategy has helped BETA address and meet the needs of Thai organisations more effectively. In the late nineties, the management initiated a large KM programme. In the first stage, a groupware (KMS) 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, the management deployed a knowledge repository system to encourage staff codify tacit knowledge and experience into a re-usable form. A number of incentives have been introduced, including monetary rewards and recognition to motivate people share and create knowledge. This section provides an overview of the case study data collection procedures as well as a summary of key findings from each collected data source (survey questionnaire, interview and observation, and process mapping).

4.1 Survey questionnaire

One hundred and thirty anonymous survey questionnaires were sent to the R&D production departments. Seventy one completed questionnaires were returned and analysed, representing a response rate of 55%. The analysis is structured into four parts: work environment and teamwork, KM, requirements for ICT support, and barriers. The survey involves both open-ended and scaled-response questions.

In terms of work environment and teamwork, the results indicate that more than 95% of the respondents work in a team and almost 60% are involved in more than one team at a time. A majority of respondents perceive their teamwork culture as bureaucratic but promotes employees’ participation. Virtual and face-to-face means (including E-mail, telephone, formal and informal meetings) are used to communicate within and across teams. Employees have raised a number of factors that inhibit team working, including: (a) lack of effective communication, (b) lack of contribution, and (c) conflicting cultures (or co-existence of several school of thoughts) reflected in working procedures (staff have been educated in various parts of the world).
In terms of KM practices, over 90% of the respondents rely on knowledge to carry out their tasks and processes. More than 60% of the respondents describe “knowledge” as the fact of knowing and understanding through experience and study, and materialises as objects to be stored, shared and maintained. Over 75% of the respondents express a preference in sharing knowledge in informal (traditional face-to-face) as opposed to virtual contexts supported by technology. This is perceived by a majority of respondents as a generalisable knowledge-sharing pattern. An interesting proportion (more than 75%) of the respondents exhibits a positive attitude to knowledge sharing as they perceive that knowledge sharing within and across organisations is very important in work. Simple knowledge sharing methods, such as storing knowledge items on the corporate intranet, represent some of the important needs expressed by the respondents, as opposed to any other methods involving extensive or advanced use of technology. However, some respondents have expressed strong concerns about sharing their knowledge arguing about confidentiality implications. Rewards, including in the form of staff development and empowerment, recognition, and financial incentives, have been suggested as effective factors that can contribute to improve staff level of motivation to share knowledge.

In terms of ICT usage, the results show that the respondents use computers mainly for (a) office automation purposes (including word-processing), (b) groupware-related needs (e-mail and some limited form of workflow support), and (c) web access. The survey indicates that 70% of the respondents often use groupware to support collaboration for intra-organisational purposes. Most respondents have expressed a preference to access information, knowledge, and services over the web, including access to document management functionality, e-learning and e-training systems to support self-learning over space and time. The introduction of solutions supporting ubiquitous access to information and knowledge resources has been appreciated by most respondents.

Finally, the gathered data helped identify barriers preventing employees to share / create knowledge in their organisation. These include: non-supportive organisational structure, lack of personal incentives, Intellectual Property Rights (IPR) concerns, reluctance to contribute (due to the fear to loose one’s expert status), software limitations, and hardware / software prohibitive cost. A majority of respondents have also raised concerns about the management push to use open source software (e.g. OpenOffice word processor) motivated by software cost reductions. They feel that this constitutes a real barrier to personal and organisational development as ICT gradually play an important role in BETA’s business processes.

4.2 Interview and direct observation

Twelve interviewees (including heads, sub-heads, and staff) drawn from four production departments, an IT department, and a KM department have been interviewed. These were complemented by direct observation. The analysis of the gathered data involved (a) producing interview transcripts, (b) generating pattern codes, and (c) drawing a checklist matrix [28].

Overall, interviewees are satisfied with their KM initiatives and the strong support they receive from their executives. This results in an increasing KM awareness and interest in the
organisation, reflected in the effective use of existing in-house knowledge services. There is a strong belief that in-house knowledge repositories do provide great value for the organisation, in particular in the context of staff loss (although when an employee quits the organisation, his / her knowledge is not lost as it is already documented and stored in the system, and can therefore be used as best practice by other staff). Moreover, the interviewees believe in the self-development potential of in-house knowledge repositories. They suggest that employees should be encouraged to share knowledge within the organisation, and should be less concerned about inhibiting factors such as IPR and confidentiality issues. However, they do feel that these concerns are legitimate when knowledge is exposed externally.

Formal and on-the-job training, and learning from documentation are interviewees’ preferred methods, respectively, to promote knowledge sharing. Knowledge sharing approaches in informal contexts such as discussion forums and coffee breaks are highly valued. They argue that these methods not only bridge the barrier between staff and managers, but also help staff practice their presentation skills, given the cultural reluctance of Thai people (due to a shy behavioural nature) to speak in public.

Interviewees have described their organisational structure as flat and participatory. This, in their opinion, has helped minimise teamwork problems. Employees tend to communicate with one another using informal face-to-face means. This promotes, as argued above, good relationship building between employees and managers. Although the prevailing participatory culture provides a strong working team spirit, potential problems may occur due to the desire of employees to be seen as being helpful by getting involved in several tasks, even when these can be achieved by one employee. 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. Interviewees have also mentioned a cultural problem where employees seem to have more respect for older employees regardless of their work performance and job status. This becomes an issue when a young manager is appointed. They have noted that this is non-changeable feature of Thai culture.

Reward systems have recently been introduced to motivate staff to share and create knowledge. The rewards offered include monetary rewards, promotion, recognition, and praise. They have noted that monetary reward and salary revision seem to be slightly resisted in the form they are currently implemented. One interviewee argues that monetary reward should be granted on an annual basis in the form of a special bonus. This is motivated by the fact that a salary revision has a permanent and definite effect (and is carried over in subsequent years) even when no further knowledge-friendly practices are demonstrated. Some categories of staff, including administrators, feel that this reward system is unfair and not suited to their jobs, as they do not involve a great deal of knowledge-friendly activities. Interviewees feel that this can be addressed through staff training and education.

In terms of technology adoption, interviewees reported that a minority of employees still resist the introduction of new IT systems to support teamwork and enhance organisational processes. This results in data redundancy and an unnecessary increase in helpdesk workload. In particular,
this minority has complained about open source software that has recently been introduced, arguing that these are more difficult to use than similar commercial solutions. However, they follow these open source policies although such policies seem to generate resentment to anyone who disagrees. This is because they want to avoid any risks, conflicts, and unexpected problems such as punishment.

In terms of perceived limitations and barriers to KM, interviewees have raised several issues, including, financial implications, lack of adapted human resources, and limited knowledge of IT.

### 4.3 Process mapping

Process mapping is defined as a visual aid for picturing work processes which illustrate how inputs, outputs and tasks are linked [29]. Process maps do provide a clearer understanding of the business context than text [30] and are extensively used in re-engineering projects [31]. The purpose of process mapping in this research is to identify existing knowledge-related practices and structures across targeted departments. The resulting process maps, expressed in IDEF0 [32], were analysed and interpreted based on the data gathered from interview and observation.

![Figure 1: Process of Knowledge Sharing and Creation in BETA.](image)

Figure 1 shows that industrial needs or market forces drive research in BETA, as it strives to be a “demand-driven” organisation. It helped identify two knowledge creation stages: the 1st Stage
involves knowledge creation in the context of the commissioned research to support the
development of a research proposal / brief, while the 2nd Stage involves fulfilling the research
proposal by producing research outputs, hence creating new knowledge. It also helped identify
two knowledge sharing patterns: Knowledge Sharing through Virtual Context, which involves
the process of knowledge sharing within virtual spaces through groupware using knowledge
repository systems; whereas Knowledge Sharing through Traditional Context involves the
process of knowledge sharing in physical contexts such as face-to-face formal or informal
meetings. Researchers can share project / research knowledge through an internal and informal
forum that all members of the department can attend. The forum aims to practice both research
and presentation skills. Moreover, knowledge can be shared through dedicated project meetings
that only project members are allowed to attend and discuss within the project team. During or
after the research, the researchers are required to produce documents related to the ongoing or
completed research, such as technical reports, papers, patents, and prototypes, and to upload
these to the organisational knowledge repository system (BETA’s Knowledge Management System).
This is the mechanism used to acquire and store knowledge and also to claim rewards
(monetary reward or promotion). The reward system was initiated based on the organisation
policy to motivate employees to share and create knowledge. All documents uploaded to the
system have to pass a quality assessment approved by a dedicated committee.

5. Discussion

Data gathered from these multiple qualitative and quantitative sources are triangulated to
address the two research questions that form the basis of this investigation, supported by
existing western as well as eastern (including Thai) literature.

Starting with the first research question, gathered primary sources of evidence confirm that a
knowledge sharing and creation culture is in place in BETA. The results indicate an overall
good awareness of, and cultural receptivity to, KM changes introduced in BETA over recent
years. The authors argue in the context of the research that to promote KM, an organisation
needs to meet four broad KM objectives [33] mentioned earlier in the paper: (a) creating
knowledge repositories, (b) improving knowledge access, (c) enhancing cultural support for
knowledge use, and (d) managing knowledge as an asset. The gathered data suggest that the
introduction of a knowledge repository system has been welcomed, as the system promotes
documenting and archiving of best practices across the organisation. In fact, the coding and
sharing of best practice is one of the common initiatives employed to initiate organisational KM
[8], and knowledge sharing can take place only once a corporate knowledge repository is made
widely accessible to staff[34]. These have helped improve knowledge connectivity, access, and
transfer across BETA. The research also confirms the role of information technology in
general, in facilitating knowledge sharing and creation, as reported elsewhere [33, 35].
Moreover, the research has identified the role of Thai culture and values in the adoption and
deployment of KM practices. This corroborates findings related to the adoption of IT in similar
contexts [36]. Building a casual environment adapted to Thai culture, such as informal forums
and personal connections, leads to positive KM practices [37], as trust and social relationships
form the foundation of Thai society [36]. Also, the research acknowledges the impact of the
change initiatives introduced by BETA over the years to increase staff KM awareness. This is exemplified by the introduction of reward systems to encourage people to contribute to KM activities, and establish an environment conducive to more effective knowledge practices, facilitated by the provision of physical and virtual spaces to share knowledge and help build knowledge communities. The change process involved (a) building awareness and cultural receptivity to knowledge, (b) changing behaviour relating to knowledge perception and practices, and (c) improving the KM process.

Overall, the gathered evidence suggests that BETA has achieved the four [33] KM objectives and has developed a true knowledge sharing and creation culture. This can help answer the second research question (What kind of perceived value is created out of existing knowledge practices across the organisation?). The four key value creation assets identified previously including human networks, social capital, intellectual capital, technology assets, and change processes [3] are used to support the discussion.

The gathered evidence shows that formal and informal communication using face-to-face (including scheduled meetings) and virtual (synchronous / asynchronous) means (e.g. telephone and e-mail) are perceived as effective to promote knowledge sharing and creation. As such, the research acknowledges the pivotal and strategic role that human networks play in promoting KM in the particular context of the collective characteristic of Thai culture, as reported in related literature [36, 38]. This has resulted in increased awareness, knowledge quality, and business intelligence which have 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 to 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 emphasises the role that social capital plays in creating organisational value underpinned by strong human networks. A participatory culture helped employees develop trust, respect, and understanding for others at different levels in BETA. This, as reported in Kayworth and Leidner [39] and Soliman and Youssef [40], contributes to improving employees’ overall satisfaction and job effectiveness.

The results confirm the usefulness of KMS to store best practices, and indicate a good enthusiasm for learning by doing, formal training or learning from documentation, facilitated by the wide introduction of technology. Knowledge is now perceived as a real asset, and gathered data highlight the importance of the ability to access internal and external knowledge. Hence, concerns raised by staff in terms of IPR and confidentiality issues. The level of awareness that exist amongst staff in relation to the power and politics of knowledge has developed remarkably over the years. This emphasises the positive perception and appreciation of BETA’s corporate intellectual capital and direct influence on KM practices. In this context, the introduction of KMS (through knowledge repositories and dedicated groupware services) has been welcomed, as the system encourages staff to store and share best practices. Collaboration through
groupware is overall highly valued, and is described as important to nurture knowledge sharing, as confirmed in related literature [41]. The incremental development and introduction of technology seem to have worked, as an acute sense of knowledge value is gradually emerging.

Thus, as illustrated in Figure 2, the value creation ‘equation’ in BETA is grounded in human networks underpinned by strong social structures facilitated by technology. Socio-cultural factors, including trust and confidentiality must be blended successfully toward the shared KM vision. Therefore, the migration path to value creation is grounded in human and cultural elements and is an exercise in change, which requires new mechanisms to enable participation and communication. The research reveals that the management have tried to adopt reward systems to motivate employees to share and create knowledge, and the employees have responded positively to the introduction of monetary and non-monetary rewards. There is a strong awareness amongst executive staff that managing the change process should not be overlooked to sustain this knowledge sharing and creation culture.

6. Conclusion

The research has investigated the KM capabilities in BETA, a Thai Hi-Tech organisation. It has also explored the perception about the value that is created out of knowledge. The results indicate that (a) BETA has demonstrated its readiness to migrate to a value creation culture underpinned by knowledge sharing and creation practices, (b) the distinctive collective characteristic of Thai culture engenders strong human and social networks, which in turn promote knowledge-friendly practices, and (c) a knowledge culture requires essential socio-organisational ingredients, including trust, confidence, motivation, continuous learning. BETA, as any other knowledge-based organisation, needs all of its employees to adopt a culture that promotes the virtues of knowledge sharing and creation. The culture of a company is the set of values, norms and attitudes shared amongst the members of the organisation. A knowledge-based culture requires a number of essential attributes, including:
- A culture of confidence and trust in which people are willing to share the information and knowledge they have.

- A culture that recognises that much knowledge is tacit and nurtured in social networks. This recognition places an emphasis on promoting open dialogues between staff so they can develop social links that can promote shared understandings.

- The support for human networks where members continuously strive to increase their shared understanding of their collective tasks and to seek continuous improvements in their practice.

The research confirms that Thai employees are full of perceptive insights into creating value out of knowledge and KM practices. Human networks, social capital, intellectual capital, and change process emerge as essential conditions to enable value creation. Focusing on social capital, the research identifies the collective capabilities derived from social networks facilitated by a supportive Thai culture. The higher the level of social capital, the more distributed communities are stimulated to connect and share knowledge [6]. Social capital can be applied to create value for organisations and end-users [42]. It has been shown that end-users in BETA are organised into teams with a strong social community dimension. Moreover, members of these teams and communities will be more inclined to use adapted KMS when they are (a) motivated to share knowledge with others, (b) able to share knowledge, and (c) have the opportunity to share knowledge. KMS that embed social awareness can play an important role in addressing these requirements, and promote social capital within and across teams.

Clearly more empirical research is needed to explore the role of KMS in promoting value creation in Thailand. A potential research avenue is to measure KM performance in organisations. It is hoped that the paper will stimulate this debate and trigger further research.

References


