Managing knowledge sharing in China: the case of Siemens ShareNet

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Abstract

Purpose - Since previous research has mainly focused on "how multinational companies generally practise knowledge management", this paper seeks to suggest that very little is known of the particularities of knowledge-sharing and knowledge management practice in the context of a specific country and culture.

Design/methodology/approach - It uses an in-depth case-research approach focusing specifically on Siemens ShareNet in China. A total of 25 interviews have been conducted with executives, general managers, and line managers within different units at the headquarters as well as in China.

Findings - Knowledge management needs to take the cultural dimension into consideration, as culture decisively influences knowledge-sharing behavior. Potential for knowledge sharing in the emerging market of China is higher than one may expect, if the necessary adjustment to the cultural context can be made.

Research limitations/implications - This research paper investigates a single case focusing on Siemens ShareNet in China. Thus, the findings may have limitations in their generalizability. Any future research needs to pay more attention to both "non-monetary incentives" and "cultural impact" of knowledge sharing, as these two issues are of particular value while so far largely unexplored.

Practical implications - Knowledge management officers are able to deepen their understanding of motivations and barriers of knowledge sharing especially in the Chinese context. The paper also demonstrates potentials for hands-on improvements.

Originality/value - This study reveals that knowledge management needs to take the cultural dimension into consideration, as culture decisively influences knowledge-sharing behavior. It also indicates that the potential for knowledge sharing in an emerging market such as China is higher than one may expect.

Keywords Knowledge management, Motivation (psychology), China

Paper type Research paper

Introduction

Knowledge management has for nearly a decade been widely accepted as a key success factor with which companies can create value. Although knowledge management was a fledgling concept in Western businesses only a few years ago, it has become an important management practice within an increasing number of multinational companies (MNCs). Previous studies by Nonaka (1994), Nonaka and Takeuchi (1995), Davenport and Prusak (1998), von Krogh et al. (2000a, b), and Voelpel (2003) have demonstrated that a company's individual and organizational knowledge serves as one of the cornerstones for its sustained competitive advantages. In other words, a company's performance is linked directly to the utilization of its knowledge resources, i.e. the knowledge of the organization and its employees.

Creation of knowledge can lead to innovation, as many researchers discovered (see Leonard-Barton, 1995; Leonard and Sensiper, 1998; von Krogh et al., 2000a, b), but also to value creation (see Davenport and Prusak, 1998; von Krogh et al., 2000a, b). One of the common practices in transforming the process of knowledge creation into innovation or value creation is to use virtual communities of knowledge sharing.

Many well-known multinational companies, such as Hewlett-Packard, DaimlerChrysler (Davenport and Voelpel, 2001), British Petroleum (Conen and Prusak, 1996), Chevron, Ford,
Xerox, Raytheon, IBM (Ellis, 2001), Siemens (Davenport and Probst, 2002; Voelpel, 2003), Shell (Haimila, 2001), and Caterpillar (Arndtviili et al., 2003), to name only a few, have integrated different kinds of virtual knowledge sharing systems. Despite the research that has been done on multinational companies practicing knowledge management throughout their globally dispersed subsidiaries, very little is known about particularities of practicing knowledge management in the context of a specific country. Beyond studies focusing mainly on the triad regions of the USA, Japan, and Western Europe, there are barely research works focusing on knowledge management within other geographical contexts, even though the relocation of industries from developed countries to low-cost developing countries will continue in the longer term. Our study addresses this research gap and will investigate the particularities of knowledge management in China.

According to Teleos’ nominations for “Asian most admired knowledge enterprises” in 2003 and 2004, there is no single mainland Chinese company under the nominees (Teleos, 2003, 2004). Nevertheless, China is indisputably a very interesting context in which to do research on knowledge management. First of all, China has been one of the most important foreign direct investment destinations for foreign and multinational companies for more than a decade. The world’s largest emerging economy was the most important recipient of realized foreign direct investment in 2002 (US$52.7 billion) and in 2003 (US$53.5 billion) it overtook the USA as the traditionally largest recipient of foreign direct investment (United Nations, 2004). This circumstance not only clearly reflects the importance of the country’s position as a major production site and marketplace for MNCs, but also the international investors’ support for China’s entry into the World Trade Organization (WTO) in November 2001.

Second, in the long term, the Chinese government is attempting to build its economic cornerstones not only on its low-cost manufacturing capability, but also on technology- and knowledge-focused industries. Many MNCs have already identified China as a desirable place to conduct offshore research and development activities. An analysis of the 2003 official statistics of the Ministry of Science and Technology provides a clear indication of this increased awareness (China S&T Statistics, 2003). Between 1987 and 2002, 65 transnational companies established 82 equity-based R&D organizations in China (China S&T Statistics, 2003).

Thirdly, the very dynamic economic development and China’s political, social, and cultural transition represent a unique business environment and an enormous challenge for the numerous MNCs doing business in the country. Overall, practicing knowledge management in China is gaining importance. The focus of our research is to identify the particularities in respect of the motivation for and barriers to knowledge-sharing behavior. This will be achieved through a case study of Siemens’ knowledge management system ShareNet as implemented in China.

Research methodology

Given the exploratory nature of the research focus on knowledge sharing in China, this research is mainly grounded in an in-depth case study, results from previous research, research of official Chinese publications, and in-depth interviews with MNC managers who have extensive experience of knowledge management in China. The case study method is widely considered to be an appropriate approach with which to explore a new phenomenon and its context in the early stages of research, especially when the research questions examine a contemporary event, and when there is little or no control over behavioral events (Yin, 1981, 1988; Eisenhardt, 1989).

As identified by the research of Davenport and Voelpel (2001), the Siemens ShareNet system is acknowledged as the best practice knowledge management system and as the decisive driver with which to enhance the global transfer of knowledge within Siemens. We used an in-depth case research approach focusing specifically on Siemens ShareNet in China. The case study generally relied on in-depth interviews as well as direct observations as the primary data source. Between 2001 and 2004 we conducted 35 interviews on knowledge management with executives, general managers, and line managers within different units at the headquarters as well as in China. We also used secondary data such as internal documents, project manuals, presentations, annual reports, and internal company

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presentations to support our research foundation. This type of triangulation can minimize the personal perspective bias and enhance the information's validity (Yin, 1981). In order to obtain the advantages of both unstructured and semi-structured interview methods, we started with open-ended questions; while in the second part of the interview we used a structured questionnaire protocol.

Literature review related to managing knowledge in China

There are remarkably few academic contributions in international English-speaking journals relating to knowledge management in China. Some of these research works partly touch upon the knowledge management issue within specific areas, such as library science in China (Wang, 2003), or the transfer process of automotive supply chain practice (Pagano, 2003). In other research works relating to knowledge management, Chinese firms serve as data source for theory development, e.g. the theory of the knowledge-based view (KBV) (Morgan et al., 2003).

Research on knowledge management with a narrower focus on the Chinese context has been conducted by Luo (1999), Chow et al. (2000), Tsang (2002), and Lau et al. (2002). In Luo’s (1999) research, knowledge differences between Asian and Western MNCs in China were identified along four dimensions, namely technical skills, organizational capabilities, marketing knowledge, and environment familiarity. Asian MNCs, he concluded, are inferior in technological and organizational competencies, but superior in host-country-specific knowledge such as marketing tactics and environmental familiarity when compared to their Western counterparts. In his research, Tsang (2002) indicates that overseeing effort and management involvement are the two most important means of knowledge acquisition for Chinese MNCs.

Cultural aspects with regard to knowledge management were tackled by Chow et al. (2000). They pointed out that the Chinese nationals’ openness towards knowledge sharing in contrast with those of the USA, is related to their differing degrees of collectivism – the relative emphasis on self vs collective interests – as well as to whether knowledge sharing involves a conflict between self and collective interests.

Lau et al. (2002) investigated the management knowledge process of domestic high tech firms in China by focusing on issues such as knowledge acquisition, dissemination, and commercialization. They concluded that the Chinese high-tech firms’ knowledge management at that time was very leader-oriented, and not yet institutionalized. This finding is widely in accordance with the reviewed academic Chinese research papers stating that most of these firms tend to acquire knowledge. To summarize, the English-language research works lack discussions on the motivations for and barriers to knowledge sharing at a managerial level within the specific Chinese context.

In the landscape of Chinese-language research works, knowledge management has received increasing attention since the late nineties. Chinese scholars widely consider knowledge management as one of the most important management disciplines that contribute to a firm’s future competitiveness. We have observed that most of the Chinese academic works in the field of knowledge management refer to leading Western knowledge management literature (see, for example, Li, 2001; Wang, 2002, 2004). In the early years, “What is KM?” and “Why is KM so important for (Chinese) firms?” dominated the range of tackled topics in Chinese-language research papers. Nevertheless, the literature review revealed a transition in the emphasis. Discussions on “How to implement KM?” and “What are the critical issues of knowledge management implementation?” have started to emerge. Many scholars apparently agree that there is still a significant gap between leading Western MNCs and Chinese domestic companies in the practice of knowledge management.

Wang (2002) offered four main reasons for the gap: inadequate planning and a lack of resources; insufficient accordance with the company’s core business; a shortage of knowledge management specialists; and a lack of appropriate management tools.

This paper will primarily focus on MNCs’ barriers to knowledge management. Management and structural problems that hinder domestic companies and state-owned enterprises (SOEs) when managing knowledge will thus not be discussed in this paper. However, our findings will also be highly relevant for Chinese companies, since all these companies are exposed to the same business-ecological and social-cultural environment.
The following section will tackle the erratic course of "Siemens ShareNet", which many scholars and researchers regard as one of the world's best practices in respect of a knowledge-sharing network.

Creating a global knowledge-sharing network: the Siemens ShareNet case

Siemens is one of the world's largest electrical and electronics companies in respect of information and communication system products and services, semiconductors, passive and electromechanical components, transportation, energy, health care, household appliances, lighting, and other businesses. The Munich-based global player with its 156 years of corporate history had more than 417,000 employees worldwide in 2003, 300,000 of whom worked outside Germany in more than 190 countries (Siemens, 2004). In 1998 Siemens was confronted with a dramatic growth in competition due to the deregulation of the telecommunications industry, as well as increasing customer demand for complex, global "total solutions." This challenge stimulated Siemens to carry out comprehensive restructuring. Siemens' telecom operations were then divided into two units – Information and Communication Networks (ICN), which offers fixed-line products and services, and Information and Communication Mobile (ICM), which concentrates on wireless infrastructure and handsets.

As a global, highly diversified organization, Siemens is not only an incumbent technology company, but also a pioneering leader in this industry. Its rich body of experience is largely based on offshore projects, not only on those at the headquarters. Cross-border knowledge management is thus of particular significance for the company. Aiming to increase the company's value, a knowledge initiative called "Siemens ShareNet" was launched by ICN's sales and marketing organization headed by Joachim Döring, President of ICN's Group Strategy. This knowledge-sharing system connected 17,000 sales and marketing employees in order to tap into the experience of ICN sales teams around the globe.

The new system integrated new components, such as a knowledge library, a forum for urgent requests, and platforms for knowledge sharing in order to gain not only explicit, but especially tacit knowledge – which is the most important source of innovation – and to improve on the traditional knowledge repositories. The web-based knowledge library, composed of thousands of knowledge bids, is this knowledge system's central component. The bids are structured so as to categorize the experience gained from ongoing and completed projects. The "urgent request" platform is ShareNet's second most important component. It allows a user to enter urgent questions which other users, who regularly scan through this forum to check if they are able to contribute their experience, will answer.

After a pilot stage in August 1999, the first version of ShareNet was launched in 39 countries. Siemens decided to circumvent both global integration and local response bias by using a "giocal" approach. Since it is widely recognized that knowledge is context sensitive, which means that the management of cross-cultural flows is the key to the global leveraging of knowledge (Gilsby and Holden, 2003), this was a wise move. ShareNet's strategic direction would therefore be jointly defined by the headquarters and local branches, but would then be centrally maintained at the Munich headquarters.

Figure 1 depicts the "giocal" ShareNet organization. Local ShareNet managers were appointed at the subsidiaries to help the initiative access the culturally embedded knowledge there. Their tasks also included tackling urgent requests, supervising local usage, representing their local company, and promoting the initiative within their regions (Voelpel and Davenport, 2004). ShareNet consultants, on the other hand, were selected from those present at the headquarters. They provided support in a specific country, arranged and managed conferences and interface with the ShareNet managers once a country's system was up and running. They also supervised the network and scanned its contributions for quality, and bid feedback, where appropriate. At that time global editors were
responsible for content quality. They had to ensure the contributions’ clarity and value, and that solutions were entered in ways that were easily understood and which facilitated efficient reuse. User hotlines and IT support further nurtured the knowledge-sharing system’s use (Voelpel et al., 2005).

Incentives were introduced to additionally motivate employees to use ShareNet. For each valuable contribution users received “shares”, equivalent to one dollar, which were in fact bonus points as in an airline mileage system. These shares were acquired for entering knowledge bids into the library, for reusing knowledge, for responding to urgent requests, and for appraising others’ contributions. Shares could be redeemed for gifts and prizes such as textbooks, mobile phones, PDAs, computers, trips to knowledge exchange partners, or courses and seminars. In 2000, more than 396,000 shares were awarded.

The introduction of those “shares” therefore boosted the number of contributions significantly. In an average month ShareNet users answered 80-90 percent of many hundreds of urgent requests. More than 20,000 knowledge bids populated the system and over 2.5 million ShareNet shares were distributed to almost 300 users. By July 2002, ShareNet was utilized by more than 19,000 registered users in more than 80 countries.

With the economic downturn in 2001, the worldwide demand fell almost immediately. The telecommunications industry was especially hard hit with most telecommunication companies sliding into tremendous deficits. Siemens was no exception. At the end of 2001 reorganization and mass dismissals affected many groups and divisions, particularly the Information and Communication group. During January 2002 ICN was restructured, which resulted in ShareNet being positioned within the newly established Competence and Knowledge Management department. The ShareNet team was trimmed to include only the manager, three ShareNet consultants, the global editor and a few full-time IT experts. While all contributions will be rewarded with shares in future, the redeeming of shares has been temporarily halted. Consequently, ShareNet’s users too adapted their behavior. The number of new entries in the knowledge library has decreased visibly and the more than 80 discussion forums are less frequented.

In order to demonstrate ShareNet’s success, ShareNet Manager Andreas Manuth and his team carried out a profound investigation into and compiled a list of the savings and business opportunities associated with the use of ShareNet. Although the Siemens ShareNet has to cope with a temporary crisis, the beneficial dimensions of this knowledge-sharing
system can be clearly demonstrated. As Figure 2 reveals, the investigation discovered that ShareNet has saved ICN more than €5,000,000 since its initial implementation in 1998. In all, 27 projects, totaling €120 million in revenue to ICN, have been won due to ShareNet’s crucial support. Joachim Döring, head of ICN group strategy, is absolutely convinced of ShareNet’s profitability and is certain that the shorter-term challenges will be mastered. ShareNet’s long-range planning is at the top of his to-do list. He explains: ‘We’re just starting to explore ShareNet’s potential.’

Siemens ShareNet in China

This section will further elaborate on the Siemens ShareNet practice in the Chinese context, focussing mainly on Siemens employees in China’s motivations for and barriers to using ShareNet.

Siemens’ operations in China are a major pillar of the organization’s Asia-Pacific business and have become increasingly important for Siemens’ global operations. Since all of Siemens’ worldwide business divisions are active in China, the organization has more than 50 companies and 27 regional offices in the country. With a workforce of 25,000 people, it is also one of the largest foreign employers. ShareNet had already been introduced to Siemens’ ICN and ICM division’s Chinese subsidiaries during the system’s pilot stage in 1999. With a total of 104,433 shares allocated in the fiscal year 2000-2001, China ranked twelfth of the 63 countries participating in the ShareNet system, with the majority of the Chinese contributions being used by global ShareNet users outside the country. In the same period, 24 Chinese contributors posted more than 400 objects. With an average of 16.7 objects per contributor, China ranked tenth of 58 actively contributing countries.

While China does not rank as one of the top users, the benefit that the organization has gained from using ShareNet in China should not be underestimated either. For example, a Siemens team once found itself at a disadvantage when facing aggressive competitors for a project. In order to clarify questions regarding an integrated microwave solution, the Siemens project team posted an urgent request on ShareNet. Their Italian colleagues...

![Figure 2: Cost and benefit of ShareNet](chart.png)

Source: Siemens ICN
provided the exact solution to the problem blocking the project, thus convincing the customer of the merit of the Siemens solution and gaining the company the approximately US$4 million contract. ShareNet China therefore enjoys an appreciated and growing status as both a knowledge provider and a knowledge receiver.

Motivations for participating in ShareNet

Motivations for knowledge sharing are complex and multifaceted. From the knowledge receiver's point of view our interview results indicate that the use of ShareNet can save considerable time and enhance productivity; the urgent request function specifically helps employees to solve obstinate problems in their daily business. According to Siemens ShareNet statistics for the period July 2001 to June 2002, the first responses mostly appeared within the first 12 hours of a request being posted, with the best answer usually appearing within the first week.

Another motivation is that ShareNet provides solutions based on the experiences of colleagues and experts. This knowledge is derived from the best practices of projects in other regions of the world. The interviewees also frequently mentioned that ShareNet provides a further important and practical function: if the answers to urgent requests are not satisfactory, the system allows users to contact people who have given high-quality responses to related projects or to questions close to the issue of interest. These experts are very likely to have solutions for these unsolved questions as well. Since some of the details are sensitive or difficult to understand, many ShareNet users contact the person who posted the relevant information directly via email or phone. This has become an effective channel for grasping tacit knowledge.

According to the internal statistics, there was a conspicuous decrease in the participation in ShareNet when the shares were no longer redeemable. Surprisingly, however, the urgent requests have maintained their comparatively high level. While new objects decreased by 96 percent between 2001 and 2003, urgent requests only decreased by 81 percent during the same period. This is most probably because urgent requests help to solve problems directly and could perhaps contribute to a decisive business transaction during tough times.

From the knowledge contributor’s viewpoint, two major influencing factors determine Chinese employees’ willingness to share knowledge. One is an incentive, the other is the culture.

As frequently mentioned by the interviewees, material incentives such as mobile phones or notebooks are an important motivation for ShareNet participation. But most interviewees simultaneously state that material rewards are not the most important aspect since in comparison with the contributors’ salary level, they do not compensate the time invested at all. Due to ShareNet users' high average workload, most of the contributions are also made during their spare time. The number of shares required in order to redeem them for awards is also very high. For example, a Siemens SL 45 mobile phone requires 900 shares, which equal a market price of around €300. If the time spent were to be paid out, it would have a much higher monetary value. The time and effort are evidently not in accordance with the monetary value. Furthermore, many ShareNet users who are eligible for an award do not want to redeem their share. They consider a large number of shares as the recognition and demonstration of their capability and expertise.

Our interviewees’ answers suggest that material incentives are not as appreciated as we expected. The higher the position of the employee, the less important the attraction of the material awards becomes. Combining this finding with the fact that the participation in ShareNet decreased markedly when awards could no longer be redeemed, we conclude that from a psychosocial point of view material incentives have a significant symbolic meaning. This issue will be further discussed in the section on barriers.

“ The Siemens ShareNet system is acknowledged as the decisive driver in which to enhance the global transfer of knowledge within Siemens.”
Culture is another determining factor that could positively influence a knowledge contributor's behavior. Hofstede (1980, 1991) and Schwartz (1994) produced prominent research on culture. Based on their results, Chow et al. (2000) investigated the impact of cultural dimensions, i.e. individualism/collectivism, Confucian dynamism (long-term orientation), concern for face and ingroup/outgroup distinction, on knowledge-sharing behavior by using China and the USA as examples of comparison. The findings of our case study are in accordance with the result of Chow et al. (2000) and strongly suggest that individualism/collectivism and Confucian dynamism are the two factors that positively influence the knowledge-sharing behavior of Chinese employees.

Individualism/collectivism refers to the relative emphasis that members of a society place on their individual self-interests vs those of the group. Chow et al.'s results suggest that in comparison with US nationals, Chinese nationals have a relatively high willingness to share knowledge, even knowledge that involves a conflict between self-interest and the collective interest. Our Siemens case study affirms this finding. The Siemens ShareNet statistics of the fiscal year 2000-2001 shows that the average number of shares gained per contributor in China (112.29 shares per active participant, ranking 22nd) is much higher than in the USA (47.16 shares per active participant, ranking 40th). The average number of posted knowledge objects (China: 16.67 per contributor; USA: 3.29 per contributor) also verifies this argument (see Table 1).

Confucian dynamism, which largely shapes Chinese culture, emphasizes long-term consequences and objectives. Among the appreciated values of Confucian dynamism, "personal steadiness" and "respect for tradition" support knowledge-sharing behavior best. The interviewees' responses support this argument, since "gaining peer respect" and "building on reputation" are frequently mentioned motivators for making a contribution to ShareNet.

### Table 1. Knowledge-sharing behavior vs Hofstede's cultural index

|                | Average number of shares gained per contributor | Average number of posted knowledge objects per contributor | Hofstede's long-term orientation index | Hofstede's individualism index |
|----------------|-----------------------------------------------|----------------------------------------------------------|----------------------------------------|--------------------------------)
| China          | 112.29                                       | 16.67                                                   | 114                                    | 15                             |
| USA            | 47.16                                        | 3.29                                                    | 29                                     | 91                             |

**Barriers to using ShareNet**

In this section different barriers to knowledge sharing in the Siemens ShareNet China case will be discussed. The following subgroups of barriers have been identified.

**Language barriers.** The official language of Siemens ShareNet is English. Chinese graduates' English language skills have improved and a certain number of Chinese employees do understand English well. Nevertheless, some of them are reluctant to write contributions. First, because they have little experience of writing English and few opportunities to do so, making contributions is therefore very time consuming. Although there are ways to express symbols and common technical terms, some problematics are more complex to explain than others are. Second, the fear of losing face due to poor English also prevents some Chinese employees from contributing actively to the knowledge base. This issue will be further discussed in the next section.

Interviewees also comment on ShareNet's English user manuals. It is very time consuming for Chinese employees to work through the whole handbook, consequently many new users start using the system without studying the handbook. However, the learning by doing approach is more time consuming than familiarizing oneself with the user manual first. Many users would thus prefer a Chinese version of the handbook, since it would shorten the orientation time as well as lower the initial barrier to usage.

**Cultural barriers.** With respect to culture, this study's findings indicate that the "concern for face" and "ingroup/outgroup distinction" are the two cultural aspects that negatively influence Chinese employees' knowledge-sharing behavior. "Face" is what other people...
think of one (Ho, 1976). The Chinese culture strongly emphasizes “face saving”, thus employees who are highly sensitive in respect of “face saving” and feel insecure with their ability to write English, are reluctant to make contributions. They are afraid that grammar and spelling mistakes can harm their “face” in the company.

Our research reveals that the current Chinese contributors are mainly middle and upper management levels that usually have decent English language skills. ShareNet participation by the lower management level is very limited.

The second cultural aspect that could negatively influence knowledge-sharing behavior is the strong behavioral difference towards ingroup and outgroup members. In Chinese culture, while “relationships tend to be very supportive and intimate within [in] group ... there is little trust and often hostility toward outgroup members” (Triandis, 1989, p. 516). Consequently, knowledge possessors are more eager to share with their “ingroup members.” This leads to the implication that a strong trust-based company culture and tight cross-division interaction are able to overcome the tendency to consider other divisions or departments as outgroups and can thus accelerate the knowledge-sharing behavior. It is in accordance with the research finding of Politis (2003), which suggests that the interpersonal trust dimension of faith in peers is in general a key factor for knowledge acquisition and knowledge sharing.

Unreliability of the incentive system: Even though, as concluded in the previous section, many interviewees do not consider material incentives as decisive for their motivation to use ShareNet, the existence of incentives is highly symbolic with regard to the employees’ knowledge-sharing behavior. After Siemens stopped redeeming shares for prizes due to financial reasons, the enthusiasm to use ShareNet dropped sharply.

We assume that this will have two negative consequences: First, the dynamics of the knowledge-sharing system will be disturbed to a certain extent. More effort will be required to reestablish the preceding well-established knowledge-sharing culture. Second, the reliability of the incentive system is important from a psychological perspective. Consequently, the credibility and acceptance of the company’s future innovative management initiatives might be hampered.

Operative barriers: From the operative and technical perspective, the interviewees’ comments are chiefly directed towards the simplification of the knowledge-sharing system. For example, some users suggest that it would save time if one could be alerted via e-mail when a new reply to one’s request has been posted. This would be more convenient than continuously logging on to check for answers. Moreover, finding the right information is perceived as time-consuming. Further detailing of the topic-related structure could lead the knowledge searcher directly to the relevant information category. At present, novices specifically need much time to learn to use the system efficiently, which could lead to some of them giving up.

Miscellaneous barriers: A number of interviewees have also emphasized that, contrary to the finding of Ardichvili et al. (2003), ShareNet offers very little assistance to newcomers in integrating themselves into their new job since the knowledge posted is sometimes too specific for inexperienced employees to use. Interviewees also mentioned that they sometimes doubt the information’s reliability. ShareNet is a relatively open platform, thus the accuracy of the contributions cannot be guaranteed. Mostly these concerns are not related to technical topics, but to whether the posted information is in accordance with official company policy. One therefore needs to be acquainted with the company’s exact strategy and policy before answering a customer’s request, since these policies may differ between regions and divisions.

Due to the increasing importance of the Chinese market for Siemens and to the reorganization of the Munich headquarters, the latter has made more effort to support the
Siemens China activities, e.g. a special support team for China has been established in Munich. Further internal information channels have been established that can replace ShareNet to a certain degree. Some employees therefore rely more on these channels and their personal information network within the organization than on ShareNet. In line with the finding of Ardichvili et al. (2003), however, the present study’s interviewees reveal that these types of personal networks did not replace a knowledge-sharing system such as ShareNet, but significantly enhanced it.

Managerial implications and conclusion

Based on the findings discussed above, managerial implications will be developed in this section in order to facilitate further improvement to and explore future potentials for Siemens ShareNet as well as for knowledge sharing in the Chinese context.

The number of active ShareNet contributors in China is disproportionately low as far as the business dimension is concerned. We also found that most of the current contributors mainly stem from the middle and upper management usually having very few English language skill problems. To a certain degree this is due to a combination of the limited English skills of the lower management levels and the influence of the “face-saving” culture. Nevertheless, even those with a limited command of English can and should contribute their specific knowledge to the community.

The huge potential that China’s growing market presents, gives this issue more importance. For example, China is already the world’s largest mobile phone market with its more than 200 million users at the end of 2002 (People’s Daily, 2002). The critical mass of the Chinese population and the Asian markets are on a global scale increasingly influencing mobile phone sizes, styles, and applications. Thus, knowledge generated in China is valuable for the company as a whole. A crucial question is therefore: How can knowledge that is only to be found in the Chinese division be tapped and made available to the company as a whole? We suggest introducing a Chinese language sub area within the knowledge-sharing system. This will stimulate contributions from and usage by the broader mass of lower management level experts. In addition, the Chinese contributors could be asked to translate their contributions’ key terms into English, or classify them into predefined English categories, which will facilitate the capturing of Chinese knowledge and make it available to the global knowledge-sharing community. If a colleague from another part of the world is particularly interested in the topic, extra effort could then be invested in translating the contribution. We furthermore suggest collecting the most appreciated contributions (a monthly or quarterly “Best of”) and translating them into English. Finally, the establishment of a local language dictionary for frequently used technical terms and key words could also enable better communication.

Almost every major enterprise in China is plagued by a high rate of staff turnover. As stated by several foreign managers and confirmed by Chinese employees, compensation strongly influences the affiliation and loyalty of Chinese R&D staff. Foreign companies are often specifically targeted as career springboards, since working for a foreign company not only provides Chinese graduates with a higher salary and wider practical international experience, but also familiarizes them with Western management practices and provides them with advanced on-the-job training. References from these jobs later help them to obtain positions with better pay and opportunities.

Building long-term staff loyalty is thus a challenge for human resource managers in China. This issue is particularly relevant for knowledge management, given that knowledge travels with people. And because the Chinese culture is characterized by a strong ingroup/outgroup distinction, the ingroup relationship has a multiplicative impact on knowledge-sharing behavior. Within the Chinese environment, creating a company culture that creates an “ingroup” feeling will therefore effectively leverage knowledge sharing.

Our interview results show that many employees understand that rewards are reduced in times of economic downturn. They are in favor of a flattened and/or more symbolic incentive system. We suggest that high quality participation by individual employees could be used as a supplementary appraisal for their personal evaluation and promotion. Since the gained
shares clearly reflect the quality of one’s contributions and expertise. A large number of shares also reflect one’s loyalty to the company and one’s willingness to contribute to the company’s success. Supported by the interviewees’ positive responses to our suggestion, we believe that “career involvement” could be a powerful means with which to encourage employees to share their knowledge.

Lower entry barriers to usage are essential. Users want the knowledge database to have a clear and more topic-related structure while, simultaneously, the steps required to use it should be user-friendly.

Siemens’ experience has shown that cross-business division co-operations are becoming important. The customers’ demands for total solutions, e.g. in airports or hospitals, are increasing. Such solutions combine, e.g. information and mobile solutions as well as building automation technology solutions. In order to meet these challenges, cross-branch knowledge exchange will be a crucial step into the future.

As summarized below, knowledge management in China entails high barriers on the one hand and huge benefits and potentials on the other hand:

1. Motivations for using Siemens ShareNet:
   - From the knowledge contributor’s viewpoint:
     - incentives (monetary and non-monetary);
     - cultural motivation such as collectivism, Confucian dynamism (in the Chinese context); and
     - demonstrate their presence and expertise via ShareNet.
   - From the knowledge receiver’s viewpoint:
     - time saving and productivity enhancement;
     - access to approved solutions and answers to problems; and
     - finding capable people who can provide help based on their experiences.

2. Barriers to using Siemens ShareNet (in the Chinese context):
   - language barriers;
   - cultural barriers (face saving, ingroup/outgroup distinction);
   - unreliability of the incentive system;
   - operative barriers (complexity of the system and structure); and
   - miscellaneous barriers (e.g. lack of time).

3. Managerial implications – how to overcome barriers and increase knowledge sharing:
   - introduce a Chinese language sub area for knowledge sharing;
   - building long-term staff loyalty and a strong company culture;
   - “career involvement” as a powerful incentive for participation;
   - top management support;
   - enabling cross-business division knowledge sharing;
   - stable (“symbolic”-based) incentive system; and
   - lower entry barriers to usage.

Our study indicates that the impact of non-monetary incentives needs to be better appreciated, especially in times of economic downturn. We imply that “career involvement” and “symbolic incentives” are amongst the most important and effective means for leveraging the employees’ willingness to share knowledge, even if these aspects have often
been neglected in the past. Moreover, top management support as well as appropriate recognition by superiors and senior management of the importance of knowledge sharing will further contribute to the practicability of these two means.

One further finding of this study is that cultural aspects, such as collectivism and “ingroup thinking”, can contribute to the willingness to share knowledge. At the same time, cultural aspects such as face saving and individualism can also hinder the employees’ knowledge-sharing behavior. Understanding influential cultural factors and the proper handling of these factors will therefore influence the success of knowledge management within a specific cultural context.

This paper aimed to contribute to the understanding of knowledge-sharing behavior in general and of the Chinese context in particular. The country has gradually increased its integration into the global economy since its accession to the WTO. Since knowledge management best practices in China will differ from those in Western contexts, research on knowledge management in China deserves more attention in the future. In addition, in this field both “non-monetary incentives” and “cultural impact” are largely unexplored, but prove to be extraordinarily important for knowledge sharing. Any future research that pays attention to these two issues should be of particular value.

References


