

# Knowledge management in China's organisations

## I. Introduction

With a population of 1.3 billion, China has recently become the second largest economy after the United States since 2010, and is increasingly playing an important and influential role in the global economy (CNN 2014; The World Bank 2014). Since the economic reforms of 1978, China has shifted from being a centrally planned to a market based economy and experienced rapid economic and social development. GDP growth averaging about 10 percent a year has lifted more than 500 million people out of poverty. On the other hand, China remains a developing country with incomplete economic reforms. According to official data about 98.99 million people still lived below the national poverty line of RMB 2,300 per year at the end of 2012, which is the second largest number of poor in the world after India. Therefore, poverty reduction remains a fundamental challenge for China's economic development (The World Bank 2014) and the resources for economic development have become imperative for China.

According to Drucker (1992), land, labour, and capital – the classical factors of production – have become secondary to knowledge as the primary resource for the new economy. Knowledge has been referred to as the only meaningful economic resource of the post-capitalist or knowledge society by Drucker (1993). Some even assert that the most valuable added on commodity is not physical resources but professional knowledge by which commodities serve customers well (cf. Marks and Patterson 1992; Lowendahl *et al* 2001). The rationale for valuing knowledge is that businesses are in the midst of an economic transition from an era of competitive advantage, based on information to one based on knowledge creation (Lang, 2001), as we live in a knowledge economy era following the agriculture economy, industrial economy and information economy eras (Davenport, 1995). With rare exceptions, the productivity of a modern corporation or nation lies more in its intellectual and systems capabilities than in its hard assets (Quinn *et al.*, 1996). It is *knowledge* – which, as Malhotra (1998) suggests, serves as a “rich carrier of human interpretation for potential action” – that has risen to prominence as the currency of the global economy as we begin the twenty-first century.

Knowledge management can be an effective tool to create competitive advantages for Chinese enterprises, if adopted and appropriately adapted into China's business context, as

knowledge management has been widely accepted as a key facilitator of value creation (Voelpel and Han, 2005).

Along with China's economic growth and exposure to competition in international markets following China's entry into WTO, multinational enterprises (MNEs) from China started to emerge around early 2000s. Chinese MNEs' share on the Fortune Global 500 list expanded from zero in 1990 to 61 firms in 2010, showing a significant increase on the Fortune Global 500 list (Peng, 2012). Practitioner oriented research from US and Europe has accepted that knowledge is *a basis for competitive advantage and superior operational effectiveness* (Halawi et al 2005 p75), Townley (1994) even asserts that 'knowledge is not secondary, detached and independent, a source of illumination, but is integral to the system of administration and governance which it helps establish' (p16). However, there has been limited empirical evidence showing knowledge management has been adopted and integrated into China's business management practices effectively most of the research on Knowledge management in China has focused on how knowledge can be shared between Chinese practitioners and their western partners in joint-ventures (Yan and Child, 2002). The features of knowledge management in China's cultural context (Burrows et al, 2005; Chen, 2006; Huang et al, 2008; Tong and Mitra, 2009; Huang et al, 2011; Chen et al, 2011), barriers and effectiveness in implementing Knowledge Management Systems in China (Martinsons & Westwood, 1997; Davison et al, 2013; Zhao et al, 2012;), and comparative study on knowledge management in China and other countries (Chow et al, 2000; Weir and Hutchings, 2005; )However, systematic knowledge management in enterprises is embryonic (Zhao et al., 2012), no Chinese companies were considered managing knowledge effectively (McKellar, 2006).

When knowledge management is applied within a Chinese context, implementation of best practices from western countries depend on national, organisational and cultural contexts (Jennex, 2008; Voelpel and Han, 2005, Chan and Chau, 2005; Glenr et al, 2005 ), as culture and context have significant bearing on how knowledge is stored, retrieved, transferred and applied (Jennex, 2008). In light of differences in cultures and local contexts, the related ICT employed in western industrialized countries should not be implemented mechanically in developing countries without due consideration of the local context (Bada, 2002). Culture forms the basis for knowledge management by providing belief frameworks for understanding and using knowledge, context provides the framing to explain how knowledge

is created and is meant to be used. Both are critical to knowledge creation and implementation (Jennex, 2008).

For instance, the Socialization, Externalization, Combination and Internalization model (Nonaka and Takeuchi, 1995) has been widely accepted and some Knowledge Management Systems have been implemented based on the foundations of this model. Activities in the Socialization, Externalization, Combination and Internalization knowledge management model (Nonaka and Takeuchi, 1995) are embedded in human societal traits in order to achieve knowledge creation and transfer. The SECI processes take place within routines, processes, practices and norms that are constructed within a culture and context, and social processes, practices and patterns play significant roles in effective knowledge management (Brookes et al. 2006). As all management behaviour takes place and all management attitudes are rooted in a specific cultural context (Weir and Hutchings, 2005), the knowledge management processes are also sensitive to cultural contexts because not only are knowledge management processes socially enacted activities that support individual and collective knowledge and interaction (Alavi & Leidner, 2001; Lucas & Ogilvie, 2006), but also the perceptions of knowledge varies from culture to culture (Jennex, 2008).

Meanwhile, cultural contexts creating knowledge management models carry cultural traits from where the models emerged in the first place. Michailova & Sidorova (2010) point out that the vast majority of publications on knowledge and knowledge management emerged from Western or Japanese contexts, and the majority of studies are 'conducted by Western researchers, on the basis of Western organizations and with relevance to Western contexts' (p69). Glisby and Holden (2003) also argue that the Nonaka and Takeuchi model 'KM model' is rooted essentially in certain culture specific features of Japanese society and business organizations, it may therefore be difficult to apply it without ascertaining parity of cultural traits of recipient organisations. It is imperative to explore if knowledge management theories created in western societies, can be applied to China's organizational context that has been engendered by long tradition and distinctive culture. In implementing knowledge management in China, the critical practice issues needs to be central, and the study on how knowledge management can be implemented in China effectively has become paramount not only for China's economic development, but also for improving China's competitive advantages.

## 2. Knowledge Management in China

Conscious introduction of knowledge management practices have been integrated into Chinese management since the new millennium (Saidi, 2007, Zhao et al., 2012). Although Chinese companies increasingly encourage their employees to apply knowledge management practices in workplaces, no Chinese companies were considered managing knowledge effectively (McKellar, 2006). In 2007, a survey conducted by China Market Intelligence Center (CMIC) and China Computer Users showed 50% of surveyed people claimed their enterprises are at the initial stages of enabling knowledge management, 32% of surveyed people claimed that their enterprises still did not have plans for knowledge management. Most enterprises only had 20% of experience and knowledge stored and documented. Much knowledge related to profitability and competitiveness inside and outside enterprises continued to be incomplete. Meanwhile, majority of surveyed enterprises considered knowledge management to be merely a knowledge sharing process, which could be easily enabled by appropriate use of IT (Zhao et al, 2013).

Cultural issues may be attributed to the ineffectiveness of knowledge management within China's business context (Huang et al, 2008), and differences between conditions of applying knowledge management in emerging economies with those obtaining within mature economies (Bruton et al, 2007). Consequently, to add to current appreciation it would be logical to investigate knowledge management in a Chinese context.

Van de Ven and Engleman (2004) considered it important to examine four common issues emerging in studies of knowledge management and innovation. First is the human issue concerning effective knowledge management. Second is the process issue of developing an effective support method. Third refers to a structural challenge of building infrastructure across organizational boundaries for facilitating knowledge management activities. And fourth is the leadership issue concerning a context that promotes knowledge management activities. In reviewing the literature on knowledge management and innovation, Lu et al (2008) have observed that the four issues seem to have been examined through both internal and external factors. Internal factors include 'organizational structures, control and coordination, mechanisms, communication channels, and organizational culture' (p363). External factors concern knowledge management across businesses, industrial and national entities, and the role of government to facilitate R&D and technology development. It is obvious that the external factors focus on improving knowledge management in industrial

and national levels, whereas internal factors are more closely related to individual organization's performances in light of knowledge management contributions, and the relationship between knowledge management and organizational performance can be examined through these internal factors.

In a study investigating knowledge management contributions to organizational performance, Gold et al (2001) proposed that effective knowledge management can be examined by way of a couple of perspectives, 'a knowledge infrastructure consisting of technology, structure and culture, along with a knowledge process architecture of acquisition, conversion, application and protection' (p186), as these may be taken to be essential preconditions for effective knowledge management. Such a framework is illustrated in figure 1 below

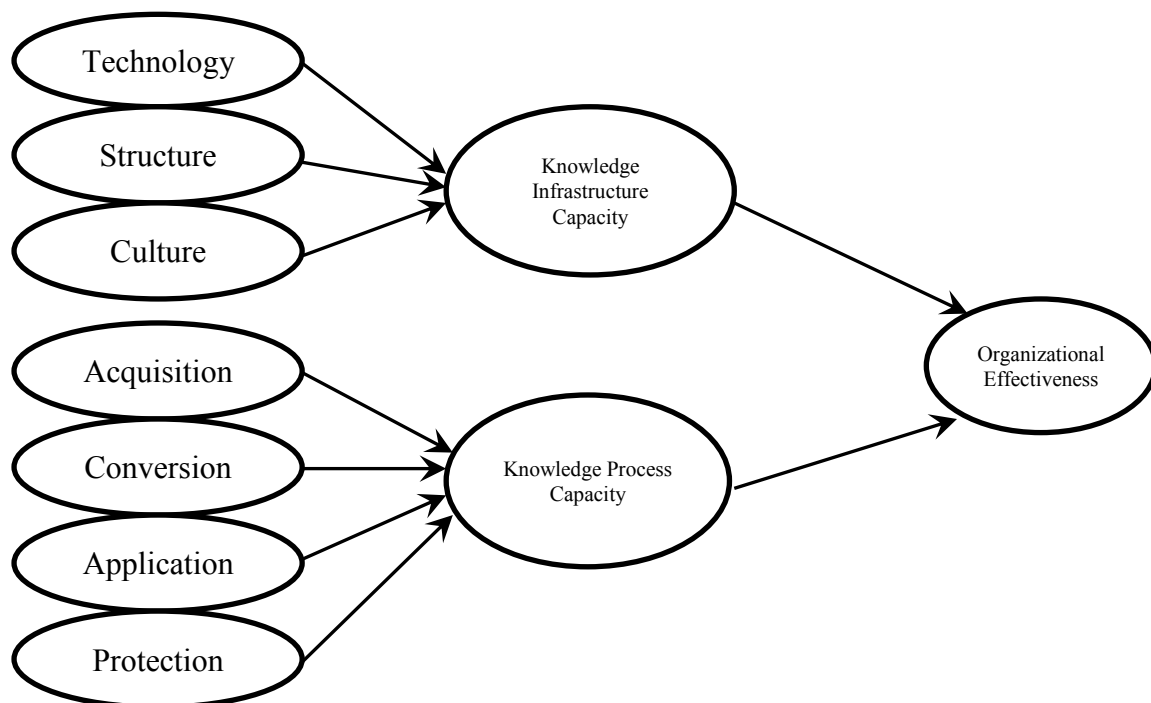


Figure 1: Framework to ascertain KM effectiveness

Source: Adapted from Gold et al (2001)

In a similar vein, Lee and Choi (2003) suggested that effective knowledge management can be assessed through a review of knowledge management enablers and knowledge creation processes. Knowledge management enablers, consisting of culture, structure, people,

supporting technology, are preconditions for facilitating knowledge creation processes. Their research framework is presented below in figure 2

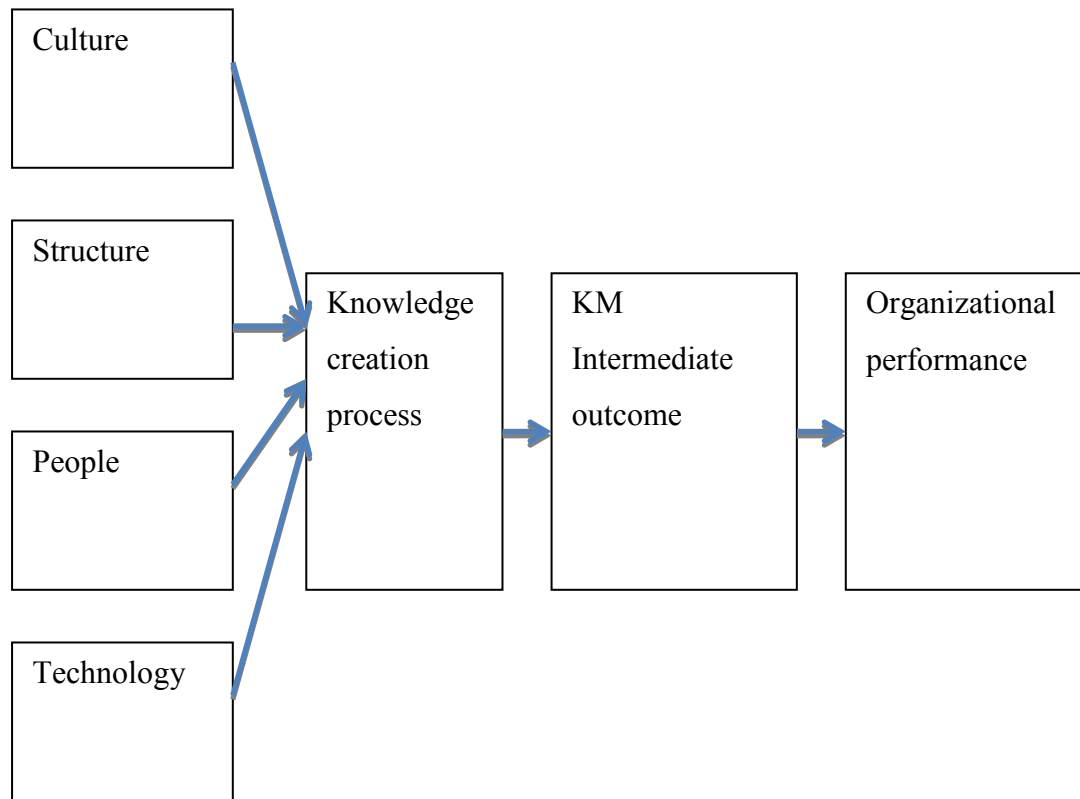


Figure 2: KM enablers

Source: Adapted from Lee & Choi (2003)

Drawing upon these factors and criteria of assessing knowledge management effectiveness (Van de Ven and Engleman, 2004; Lee and Choi 2003; Gold et al 2001), knowledge management practice in China is examined through the following three aspects, which are considered as key enablers supporting, knowledge management processes (Gold et al, 2001; Lee and Choi 2003).

1. *Culture*: This is a fundamental element in shaping people's behaviour including communication, information processing and knowledge management. The main focus of this aspect is Chinese national culture rather than organizational cultures.

2. *Organizational structure*: refers to the structure and underlying mechanisms governing management activities supporting knowledge management processes.

3. *Technology*: including IT infrastructure and other related technological platforms that support knowledge management.

## 2.1 National Culture

It has been argued by Voelpel and Han (2005) that part of the knowledge management failure in China's business organizations can be attributed to the influence of China's national culture that discourages employees from engaging in knowledge sharing activities; therefore it is imperative to study the correlations between cultural issues shaping business practices and knowledge management in China.

It is clear that communication and information processing are significant to Knowledge management activities. However, the communication patterns tend to vary across cultural boundaries. Studies on national cultures by Hofstede (1980, 2001), the GLOBE-project proposed by House et al. (2004), Trompenaars (1993), Hall (1976) and Schwartz (1992) all acknowledge the relevance of communication across cultural boundaries. Among these studies, Hall's research provides a communication-oriented perspective on culture: 'We believed that culture is communication and no communication by humans can be divorced from culture' (Hall, 1992: 212), as cultures differ in their use of context and information to create meaning (Hall, 1976).

The concept of high/low-context communication was elaborated in *Beyond Culture* (Hall, 1976), in which Hall (1976) suggests that cultures can be characterized according to their communication styles by referring to the degree of non-verbal context used in communication. In reviewing Hall's studies, Kittler et al (2011) pointed out that context, information and meaning are central terms to Hall's conceptualisation, which argued that there is no meaning without a combination of information and context.

**Context** describes *preprogrammed, rather culture-specific cues that only need minor activation (through) information to establish meaning. The nature of context in this appreciation is usually (but not exclusively) non-verbal reflecting implicit content.*

**Information** can then arguably be understood as *elements of meaning that are explicitly transmitted by the sender and need no preprogramming beyond the common code of transmission*

*(language). The nature of information in this comprehension is usually (but not exclusively) verbal, providing explicit content.*

*Meaning is considered as the result of a synthesis of context and information. Consequently, meaning can be understood as the result of a cognitive combination of context and information (Kittler et al 2011, p67-8)*

In studies of national culture using Hall's yard stick, Chinese national culture has been consistently classified as high-context culture, this implies that it would be difficult for outsiders to understand a piece of information without proper contextualisation and explanation of the background for that piece of information. This has increased the complexity and dynamics of defining knowledge and contextual estimation for knowledge use in China, as Turner and Makhija (2006) point out an important dimension to comprehend the dynamic nature of knowledge is 'Completeness'. Knowledge failing to inform decision making is considered incomplete and new information needs to be sourced to make the knowledge complete. However, the completeness of knowledge is difficult to measure and knowledge is difficult to distinguish from information even in studies carried out in low context countries. Many knowledge management projects in western countries in reality turn out to be information management projects that yield consolidated data but little contribution to knowledge creation (Gold et al, 2001).

Argote and Ingram (2000) suggested a barrier for a comprehensive understanding of knowledge management that has been attributed to the basic fact that knowledge is unobservable and difficult to define. An approach to define knowledge is to examine its relationship with data and information. However, Bhatt (2001) argues that only through external means or from a user's perspectives, can one distinguish between data, information, and knowledge, which imply that objective definitions for data, information and knowledge are not easy to come by. Attempts to distinguishing data and information from knowledge accept that contextualization is an important step in transferring information to knowledge while the task of transferring information to knowledge needs to be carried out by human beings.

A further approach to define knowledge without distinguishing data and information from knowledge was to classify knowledge with tacit and explicit dimensions. The phrase "tacit knowledge" was first used by Polanyi (1958, 1962), and then later widely quoted, especially after Nonaka's work on tacit knowledge and explicit knowledge. Tacit knowledge implies that certain knowledge is hard to capture and transfer. Explicit knowledge is codifiable



(Makhija & Ganesh, 1997) and is easily understood and articulated (Kogut & Zander, 1992). Nonaka and Takeuchi (1995) articulate these terms as

- Explicit knowledge is documented and public; structured, fixed-content, externalised, and conscious (Duffy, 2000). Explicit knowledge is what may be captured and shared through information technology.
- Tacit knowledge resides in the human mind, behaviour, and perception (Duffy, 2000). Tacit knowledge evolves through people's interactions.

Nevertheless, Polanyi (1966) has pointed out that tacit and explicit knowledge are not sharply divided. While tacit knowledge can be possessed by itself, explicit knowledge must rely on being tacitly understood and applied.

Based on coverage of debates in defining knowledge, Ruan et al (2012) adopt a pragmatic approach and suggest knowledge needs to be defined in relation to specific problems in management practice, as 'knowledge is always about action—'knowledge must be used to some end' and 'knowledge' is a "capacity to act" (Nonaka and Takeuchi 1995, pp. 57–8). In short, knowledge management involves providing solutions to a set of problems within a predefined context; knowledge is not primarily about facts but more about context-specific characteristics (Teece 2000). Knowledge management in business practices needs to address particular tasks and problems that require actions and solutions (Ruan et al, 2012); knowledge definition and the distinction between knowledge, information and data needn't be separated from a context within which a present problem necessitates knowledge, and knowledge would be valuable when it is used for decisions and acts (Martensson 2000). Some western researchers have applied the distinction between tacit and explicit knowledge to studies on knowledge management in China. Burrows et al., (2005) argues that codified explicit knowledge is relatively rare in the Chinese context, as Chinese prefer informal and implicit communication (Martinsons and Westwood, 1997); tacit knowledge typically shared by Chinese is not readily codifiable (Davison and Ou, 2007).

Some other elements influencing knowledge management in China have also been identified in previous research.

Huang et al (2008, 2011) identified *guanxi* and *face saving* as two fundamental elements in Chinese culture which impact knowledge management activities. *Face* is a salient issue

(Ting-Toomey, 1988) and Chinese tend to maintain *guanxi* for considerations of group harmony (Huang et al, 2008; 2011). These two elements are also considered critical factors in empirical research for implementing knowledge management systems in China's manufacturing industry (see Tong and Mitra, 2009), because Chinese society is relation-oriented that emphasizes interdependence, mutuality and reciprocity (Lee et al, 2006). In their study, Huang et al (2008) found that although employees in China tend to share knowledge in order to maintain *guanxi*, they are more inclined to safeguard their valuable knowledge in fear of losing power, 'when employees find that they could still maintain good relationships with colleagues without sharing their precious knowledge, they will tend not to share' (p464). Another important finding from their study is that these employees actively engaged in 'codifying knowledge' to meet the company's requirements. This may be interpreted as that employees are not averse to externalize their knowledge into information that can be stored and transferred within organizational boundaries. However, as discussed in the first part of this section, without proper contextualization it is difficult to transform codified knowledge into actionable knowledge that subsequently contributes to problem solving. Huang et al (2008) found another cultural element, *face* saving, that has multiple effects on knowledge sharing intentions. Employees may gain *face* for sharing knowledge and helping others, but those who need knowledge may not ask for help in order to avoid embarrassing the knower, in other words, to save the knower's *face*. Huang et al (2008) point out that knowledge sharing culture in their study is not strong enough to make knowledge sharing part of the employees' professional obligations in China's organizational context; as the motivation of sharing knowledge is low, there is little incentive to transfer their personal knowledge into organizational knowledge. The impact of *guanxi* and *face* from Chinese culture on knowledge management is also confirmed by Liu & Porter (2008) in reflecting on their lengthy business practice experiences in China. In reflecting on the impact of *guanxi* and *face* saving, they point out that informal personal network is an important knowledge sharing mechanism. However, the reliance on informal personal network in knowledge sharing can be attributed to lack of effective knowledge management systems, as in situations whereby formal institutions are weak, informal institutions, such as norms governing interpersonal relationships, rise to play more important roles in management. (Peng & Heath, 1996).

*Guanxi* and *face* saving are also identified as two key factors in Kubátová's study about the impact of Chinese culture on knowledge management. Knowledge is a source of power and

a kind of favour which should be exchanged through intimate relationships with expectations of reciprocity (Kubátová 2012), in Chinese culture ‘every favour must be returned within a certain period of time, sharing knowledge is also considered a favour’ (p25). In this study, Kubátová (2012) challenged some underlying assumptions on effective management of knowledge that were built on western cultural precepts featuring lower power distance and high levels of individualism. Western knowledge workers are usually independent and are actively engaged in problem solving, that is encouraged in western culture. However, the open and free knowledge exchange is rare in China’s organizational context; this can be partly attributed to high power distance and a collectivist orientation (Kubátová 2012). For the same considerations, few Chinese managers are willing to accept knowledge from their subordinates (Hong and Engestrom, 2004).

The dimension of collectivism and individualism (Hofstede, 1993; Trompenaars, 1993) was also investigated by Chen et al (2011) in order to assess effectiveness of knowledge management in China’s cultural context. In their study, the collectivism and individualism dimensions were considered key measurements - distinguishing Chinese culture from western ones, and the *guanxi* and *face* saving were interpreted as cultural consequences of the collectivist values that emphasized relational harmony over the importance of tasks (Chen et al 2011). Chen et al (2011) pointed out, open discussion of conflicting opinions, as an effective approach for knowledge creation and exchange in western cultures that maybe intentionally avoided in Chinese culture in light of maintaining relational harmony and group unity.

## **2. 2 Organizational structure**

Burrows et al (2005) conducted research into the organizational context in applying knowledge management in China. Based on analysis of data from surveys, interviews and focus groups, longitudinal case studies and anecdotal information over a decade, Burrows et al (2005) regarded that Chinese are inclined to manage knowledge formally and personally in comparison to their Japanese and American counterparts. For instance, using a western rational paradigm, essence of experience is codified and spread across organizations as explicit knowledge, that factors in advantages of IT investment (Cohen, 1998; Burrows et al, 2005). According to Burrows et al (2005), knowledge management practices in China are distinctive in the following aspects, namely key assumption, knowledge management roles and goals, the implementation of communities of practice. Although knowledge management

in Japan and China share the view of knowledge as being largely tacit and contextual, Japanese companies have had effective solutions to overcome barriers from knowledge tacit dimensions and national culture. Not only that knowledge management has been incorporated in their management philosophy as an integral part of continuous improvement, but also Japanese middle managers actively contribute to bridging the ideals of top executives and the messy situations facing knowledge workers. However, this kind of vertical transfer of knowledge, which is common place in Japan, is restricted by status-based hierarchies in China (Burrows et al, 2005).

Based on their observations, Burrows et al, (2005) considered that Chinese business organizations may encounter greater knowledge management challenges when more Chinese business activities, cross organizational and national boundaries. They also compared knowledge management between U.S., Japan and China which is illustrated in table I below.

	<b>U.S.</b>	<b>Japan</b>	<b>China</b>
<b>View of knowledge</b>	Measurable and manageable entity	Largely tacit and contextual	Largely tacit and contextual
Key assumption	Knowledge is mostly objective and can be made explicit	Knowledge is mostly subjective and socially dependent	Knowledge includes both objective and subjective elements
Knowledge management roles	Knowledge workers capture, codify, and share knowledge from experience	Everyone creates and shares knowledge as an integral part of socialization	Senior management and trusted supervisory staff are repositories of knowledge
Knowledge management goals	Profits are paramount and result from improved productivity	People are paramount (social consensus)	Pragmatic (profits and people)
Communities of practice	Achieving acceptance in industry despite resistance to	Widespread in application; seen in both Kaizen (internal) and	Limited by one-way flow of information (superior to subordinate) and

	changing work rules, particularly in unionized Old Economy Industries	Keiretsu (external) knowledge sharing	by difficulties in building trust in short-term contractual relationships.
Example	U.S. auto industry develops e-platform for knowledge exchange	Toyota encourages knowledge sharing by its business partners	Chinese partners share knowledge and look beyond their industries

Table 1: Comparative views of knowledge

Source: Adapted from Burrows et al, (2005)

Lin and Germain (2003) examined the architecture of State-Owned-Enterprises (SOE) in order to study how the use of knowledge on customer and market can improve organizational performance. SOEs in China play important roles in China's economy and their management processes and style prevail in China's business management practices. At the end of 2011, there were 144,700 State-Owned-Enterprises in China, which account for 43 percent of China's total industrial and business profit (Cary, 2013).

Lin and Germain (2003) is subscribed to the view that although formal institutions exist in China's SOEs, the processes and policies are imprecise and unsystematic (Li, 1999). Formalization, featured along with standardized, quantifiable measures of corporate management, is very low in China's SOEs (Lin and Germain, 2003). Based on some prior research (Hegewisch, Brewster, & Koubek, 1996; Pollert, 1999; Savitt, 1998), Hutchings (2005) attributed the lack of formalization to little need for the management processes that have evolved in market economies, as SOEs operate as large, functional units with a strong production orientation. Overloaded hierarchy is common in Chinese SOEs that construe from continued inadequate information processing capabilities, the lack of integrative mechanisms, and unclear responsibilities (Lockett, 1988).

Not surprisingly, personnel turned to rely on personal networks in order to achieve effective communication and problem solving in SOEs (Lin and Germain, 2003).

As a reflection of *guanxi* at organizational level, the personal network acts as an informal

management mechanism that complements formal structures, or overweigh them on some occasions. However, as an informal coordinating mechanism, *guanxi* is also problematic that may operate against internal changes based on personal attachment (Park and Luo, 2001).

Although this observation can be interpreted by the school of thought that social capital facilitates learning and knowledge transfer (Kostova, 1999; Nonaka & Takeuchi, 1995), as social networks enhance acquisition of tacit and complex knowledge and reduce institutional distance (Lau et al, 2002). Lau et al (2002) conducted research in how high-tech firms in China manage knowledge and their investigation lead to the finding that knowledge management wasn't yet institutionalized.

Based on prior research Lau et al (2002) considered that social capital can facilitate knowledge transfer from two perspectives in the midst of lack of institutionalized practice. First, social capital creates a set of higher order organizing principles and acts as mechanisms for codifying knowledge into common language accessible to other individuals. Second, social capital increases the efficiency of actions of individuals and reduces the probability of opportunism in knowledge transactions. However, social network and social network in western society is not equivalent to Chinese personal networks, there are subtle differences between the two concepts. For instance, social network in China dominates Chinese social and personal life and it is difficult to distinguish the personal network in work place and personal life. This phenomenon and its impact on knowledge management practice will need further research as the personal network is an effective mechanism shaping business management practices in China.

Knowledge management in China's public sector is very limited. In an empirical investigation based on study of China Customs, Cong (2008) points out that knowledge management in China's public sector is still in its infancy, knowledge and knowledge management are not widely introduced into practices, incentive and reward system for knowledge sharing hasn't been established, and proper training and education for knowledge management don't exist. The delay of introducing new management initiatives into practice is consequent to the administrative or management reforms in China's public sector that are sensitively associated with political reform (Cong, 2008)

## 2.3 Technology

Technology is one of the key elements in knowledge management processes in today's information intensive business world. In knowledge projects, technology mainly refers to specially designed software and hardware for capturing, storing and sharing knowledge (Chen, 2006). A key implementation of IT technology in knowledge management is computer-based Knowledge Management Systems (KMS) (Oshri et al, 2008), as much of knowledge is held tacitly by individuals, researchers have also attempted to abstract or convert it into explicit forms that are amenable to formal representation (Davidson et al, 2013). However, these formal KMS are rarely designed to support unstructured, implicit and often ambiguous human interactions (Davidson et al, 2013), which is a common platform for sharing tacit knowledge. These unstructured, implicit and often ambiguous human interactions are preferred formats of knowledge sharing in China as the prevailing culture in China has a deeply embedded preference for informal and tacit forms of information (Martinsons & Westwood, 1997) as Chinese prefer interactive communication (Davidson et al, 2013).

In reviewing prior research, Davidson et al (2013) conclude that IT can support KM in two distinct ways:

- 1, formal systems designed to capture and deliver knowledge based on structural rules;
- 2, interactive IT applications that facilitate informal KS between individuals and groups (p90).

These two approaches are supposed to be complementary rather than contradictory, one may outweigh the other depending on a specific cultural context. Despite massive investment in KMS, the vast majority of organizational knowledge remains uncoded as such codification may not be consistent with cultural and/or personal preferences (Davidson et al, 2013).

Davidson and Ou (2007) point out that while IT-enabled sharing of explicit knowledge is a common practice in China, sharing tacit knowledge on IT platforms can still be difficult in China, which reflects Martinsons' (2008) assertion that explicit information and knowledge is scarce in a relationship-based economy like China. While IT infrastructure is increasingly developed and adopted for supporting business management, there is little evidence that IT applications are used to support knowledge sharing. On the other hand, as Chinese prefer

informal and personalized knowledge management processes (Burrows et al, 2005).

In consequence, it is suggested that interpersonal socialisation rather than IT will determine the success of tacit knowledge sharing initiatives: “In the digital era, there is still no perfect substitute for the motivational effects of human bonding and social connectedness” (Lu et al., 2005, p.33).

However, some companies are responding to overcome the barriers for sharing knowledge in China. The knowledge sharing process is improved by integrating knowledge management into performance evaluation, and systematically recruit and socialize knowledge workers (Burrows et al, 2005); this method of focussing on selecting and socializing individual workers tend to be more effective in China (Chow, 2000).

Furthermore Davidson et al (2013) considered that an informal knowledge sharing process should be adopted and encouraged to support formal KMSs. Ou et al., (2010) pointed out that informal KS often supplements formal knowledge management practices to enhance individual and team performance in China. By engaging in informal and interactive KS, employees can discuss innovative ideas, comprehend the context of specific information, and then such socially facilitated informal knowledge can be re-contextualised by the recipient (Davidson et al 2013). Therefore, Davidson et al (2013) recommend to use interactive IT tools in China which is evidently effective (Tong and Mitra, 2009; Ou, 2010).

In reviewing the literature on how IT and KMS can support Knowledge Management, it is recognizable that the successful use of KMS is dependent on considerations of cultural and organizational impacts; and the use of technology shouldn't be emphasized over cultural and organizational elements. Evidently, in China, interactive IT tools seem to be more effective than e-platforms used in western counties as Chinese are inclined to use interactive communication to transfer tacit knowledge.

## **2.4 Implications of the normative model of Knowledge Management**

**I. Connect:** provide all people in the organization access to all relevant information. Connection relates to technologies that enable collaboration and communication, norms that guide information sharing, and the principles that engender trust, empathy, and commitment. Without connection, the right knowledge cannot flow to the right people at the right time. Connect, refers to knowledge sharing between people connected with



appropriate communication channel and recognised communication pattern.

Two issues in managing knowledge in China require further examination in regard of *connect*, namely *guanxi* and high context culture. Without proper *guanxi*, the contextualisation process which translates a piece of information to meaningful and actionable knowledge, becomes difficult as the senders may deliberately hold the knowledge while revealing some information. Due to the features of China's high context culture, the connect cannot be realised consequently. Business networks in western societies are different from *guanxi* of China. *Guanxi* implies some special connections business practitioners can rely on in the absence of formal institutions and regulations in order to deal with uncertainties. It also plays an important role in knowledge dissemination process as employees don't want to pass actionable knowledge to someone they cannot rely on in light of losing power.

**2. Competencies:** people have the skills and characteristics for the exploitation and exploration of knowledge. The normative model includes several sets of aptitudes, attitudes, and abilities needed to support collaboration, communication, and commitment. HRM practices for recruitment, selection, retention, rewards, and training are the primary means for ensuring that people have the ability and motivation to participate effectively to KM efforts. These can be important indicators of an organizational culture that values learning and recognizes that superordinate goals can only be achieved through the contributions of individuals. *Competencies*, are the skills and characteristics for the exploitation and exploration of knowledge. Competencies can equip recipient of information with a proper context and enable translation of information into knowledge. As discussed above, the high context culture in China determines that more contextualisation efforts are needed in addition to competencies. Chinese practitioners prefer interactive communications in order to probe into the key elements required to complete their contextualisation process. Therefore, competencies are necessary but not sufficient in knowledge contextualisation in China.

**3. Contacts:** facilitate and encourage contacts between people and relates to flat organizational structures and cross-functional teams that are adaptive and integrative, the networks that facilitate contact, IT systems that enable collaboration and communication. Whilst this C could be a characteristic of western multinational company branches in China

yet for pure Chinese organisations this continues to be an aspiration. In grained and embedded concepts of hierarchy that have permeated Chinese organisations like its political landscape make it difficult to conceptualise a flat organisation with cross-functional teams.

**4. Communication:** create an IT system that supports the exploitation and exploration of knowledge. Whether through documents or conversations, knowledge sharing requires communication and a technology infrastructure that enables it. This particular C, Communication, refers to the infrastructure which enables knowledge management process and support for communication. With the high power distance national culture, it is difficult to encourage adaptive and integrative communication and collaboration without consideration of the organisational structures. The use of IT systems in China's knowledge management has to take into account how to accommodate the rigid hierarchical structure to reflect the importance of the leaders while they are used to be reported to, rather than copied in on emails.

**5. Catalysts:** motivate people. Catalysts here refer to factors that provide intrinsic and extrinsic motivation for participation in KM activities. These include leaders who build consensus on the value of KM and inspire commitment to learning as well as HRM practices that reward and recognize individual effort. This seems to be still embryonic within China's organisations. Over a period of the next decade as Chinese organisations are able to meld indigenous as well as external managerial attributes into the knowledge use potential of staff it is likely that Chinese organisations would see growing numbers of people who'd be prepared to take on the role of champions for specific causes. It is clear that organisational dynamics within China are reliant to some extent on the motivation generated by role models – it may therefore be rightly expected that this particular attribute is likely to acquire importance in the knowledge management aims of Chinese organisations.

**6. Culture:** Create a group identity by aligning values and organizational practices  
The normative model speaks to culture in many ways, most prominently in the discussion of values that support collaboration and commitment. This particular attribute seems to be slightly unconnected to the way China's organisations have been developing. Guanxi for group behaviour and face saving for individual interaction are the two overwhelming behavioural characteristics that tend to be influencing any acquired Western attributes.

Given that knowledge management is in its infancy in China it is likely that attributes like a culture of knowledge sharing is going to become pronounced as key actors within and without organisations become sensitised to international standards.

**7. Capability:** A system-based advantage that is difficult to replicate by competitors. The final “C” is capability. The normative model is based on the idea that each of the other “C”s together comprise an organization’s KM capability. Combination of the first four Cs is likely to generate specific uniqueness for a Chinese organisation. As players within China’s organisations gain experience of working and travelling to western European and US regions it is likely that a new range of expectations and experiences will garner different organisational behaviour. Being a vast country with numerous regional cultural traditions that have not been too well known to be looking to external knowledge transfer, a combination of the latter three Cs is probable to emerge over the next decades as norms of traditional interaction are overwhelmed by international working practice.

### 3. Conclusion

At a time when most multinational companies around the world are progressing to developing knowledge assets to ensure that their capabilities are difficult to replicate organisations in China seem to be reliant on *guanxi* and *face saving* as the two pillars of interaction. A modicum of reluctance to let go of these traditional arrangements of interaction seem to linger on in most forward looking and active organisations. Reliance of what is known among accepted behavioural traits tends to assure diverse organisational setups. Lack of trust of what is unknown and probably too task based seem to be also driving the sharing of knowledge in China. Relationship oriented interactions have long been the tradition of China’s organisations where the long term trust has played a stronger role in comparison to risks of immediate gains.

During the 1990s when China was opening up to international markets and the country was liberalising trade, research (cf. Schmitt, 1997; Wong and Yu, 2003) found that such motivation was driven by a dearth of uniqueness among products and services on offer. Today much of that frustration has been replaced with innovation and uninhibited growth of manufacturing. At the same time *guanxi* and *face saving* are unlikely to be characteristics that are going to be disappearing soon. In a national psyche where external countenance

overrides internal conflicts, China's organisations will strive to be seen to be world class because of the products and services that they offer. Uniqueness as a result of the combination of the seven Cs is going to come about when equilibrium between trust and risk can be achieved. Just as China's monolithic political context has overridden the many change expectations within modern Chinese institutions similarly *guanxi* and *face saving* will evolve to get factored into a progressive code brought about partly by Western conceptualisations of knowledge. Until then knowledge management in China's organisations will remain a transitory development with many local and few global attributes. Just as firms that succeed in effective knowledge management progress to mature players in industry, it is probably not far when the advantages of such knowledge management may seep into uplifting the many impoverished Chinese who live in the margins of life. This chapter by dwelling on the actionable nature of knowledge as well as the most prominent characteristics that balance risk and trust has provided a conceptualisation of the evolutionary nature of knowledge management in China's organisations.

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