

**THE EFFECTS OF CULTURE ON KNOWLEDGE
MANAGEMENT PRACTICE: A QUALITATIVE CASE STUDY
OF MSC STATUS COMPANIES**

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Knowledge is recognised as being an important asset in organisations these days. Despite this, many organisations are not doing enough to effectively manage this important asset for its competitive advantage. In response to this, knowledge management which is defined as a process that effectively creates, captures, shares and uses organisation-wide knowledge to improve the organisation's performance was conceived and has since gained widespread acceptance the world over. Despite its widespread acceptance, little is known about the current levels of knowledge management within the Malaysian context, in particular amongst the Multimedia Super Corridor (MSC) status companies in Malaysia. Furthermore, the extent to which cultural factors impact upon knowledge management practice in these companies is not known. This study investigated the various cultural factors (collaboration, mutual trust, leadership and incentives/rewards) using a multiple case study approach operating within a critical realism research paradigm and found that these factors have impact on the level of knowledge management practice. The study also established that cultural factors do play an important role in facilitating knowledge management practice in these MSC status companies in Malaysia. It was found that collaboration, mutual trust, leadership, kiasu-ism and incentives/rewards have significant impact on the level of knowledge management practice. In view of the findings of this study, it is suggested that the relevant authorities pay adequate attention on these

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cultural factors to ensure that the knowledge management initiatives undertaken by Malaysian companies are effectively deployed.

Keywords: Knowledge management, Case study, Cultural factors

INTRODUCTION

Knowledge, recognised as being an important resource to organisations these days, has to be effectively and efficiently managed for organisations to leverage on it to obtain competitive advantage to achieve success in the dynamic business environment (MDC, 2005). The new, knowledge-based economy places great importance on the creation, use and effective diffusion of knowledge (Ford & Staples, 2006; Lu, Leung & Koch, 2006; Mannington, 1999; Martensson, 2000; Metaxiotis, Ergazakis & Psarras, 2005; Nonaka & Takeuchi, 1995; Salojarvi, Furu & Sveiby, 2005; Spiegler, 2000; uit Beijerse, 1999). This makes it an imperative for organisations to concentrate on maintaining and developing the knowledge capital that they possess in order to innovate and remain competitive. The organisation's "ability to learn, adapt and change, becomes a core competency for survival" (Metaxiotis, Ergazakis & Psarras, 2005: 6). This article will provide a brief overview of knowledge management and then examine the relevant cultural knowledge management enablers from the extant literature investigated using a qualitative approach towards MSC status companies in Malaysia.

Due to the relative infancy of this emerging field, various definitions and frameworks of knowledge management exist which have resulted in a "less coherent and more fragmented" view of this domain (He, Lee & Hsu, 2003: 1269). To appreciate the reasons for this "fragmented" view of knowledge management that exists today, it is important that the background and history of knowledge management be surveyed before a working definition of the term – knowledge management – is provided.

Knowledge management has its roots deeply ingrained in the study of knowledge which has been a deeply contested issue since ancient times (Drucker, 1993; Turban & Aronson, 2001). However, knowledge management as a field of study itself is relatively a new concept which surfaced in the early 1990s (Drucker, 1993; Metaxiotis, Ergazakis &

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Psarras, 2005: 7; Prusak, 2001: 1003). With a relatively short history to its current development, knowledge management is still a turbulent and "noisy" field which is used to refer many things. A large number of working definitions of knowledge management is circulating in the literature and around companies worldwide (Kakabadse, Kakabadse & Kouzmin, 2003). Some researchers are of the opinion that the complexity behind defining knowledge management is partially attributed by the challenges in identifying knowledge itself (Choo, 1998; Cortada & Woods, 1999; McAdam & McCreedy, 1999; Metaxiotis, Ergazakis & Psarras, 2005).

Wiig (1997) proposed that knowledge management is the systematic and explicit management of knowledge-related activities, practices, programmes and policies within the enterprise. Another definition by Sveiby (1997) posited that knowledge management is the art of creating value to organisations by leveraging intangible assets. Malhotra (1998: 58) defines knowledge management as catering to the

... critical issues of organisational adaptation, survival and competence in face of increasingly discontinuous environmental change... Essentially, it embodies organisational processes that seek synergistic combination of data and information processing capacity of information technologies and the innovative capacity of human beings.

A widely-accepted view on knowledge management is by Davenport and Prusak (2000) who proposed that knowledge management is largely concerned with the exploitation and development of the knowledge assets of an organisation with the view of furthering the organisation's objectives. It is also explained that the knowledge assets mentioned in their definition include both explicit, documented knowledge and tacit, subjective knowledge of the organisation (Davenport & Prusak, 2000). It is also argued that knowledge management improves an employee's comprehension in a specific knowledge domain through the systematic and organised process of finding, selecting, organising, distilling and presenting knowledge (Davenport & Prusak, 2000; Poh, 2001; Tidd, 2001; Wiig, 1993, 1997, 2002). Knowledge management helps an organisation gains insights and further understanding from its own experience (Davenport & Prusak, 2000; Despres & Chauvel, 1999; Poh,

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2001; Takeuchi & Nonaka, 2004; Wiig, 1997). Knowledge management activities can assist the organisation on acquiring, storing and utilising knowledge for processes such as problem solving, dynamic learning, strategic planning and decision-making (Sveiby, 1997; Takeuchi & Nonaka, 2004). In addition, knowledge management has the ability to protect intellectual assets from decay and loss (Armistead, 1999; Awad & Ghaziri, 2003; Cecez-Kecmanovic & Kay, 2002; Davenport, De Long & Beers, 1998; Lang, 2004; Poh, 2001).

A review of scholarly and praxis-based definitions reveals that there is a general agreement on what knowledge management is. A consistent theme in all espoused definitions of knowledge management is that it provides a framework that effectively builds on past experiences of the organisation and provides an avenue for new mechanisms for knowledge transfer and creation to emerge (Chase, 1997; Choo, 1998; Ford & Staples, 2006; Kakabadse, Kakabadse & Kouzmin, 2003; Takeuchi & Nonaka, 2004).

Researchers and practitioners alike agree that knowledge management effectively creates, captures, shares and uses organisation-wide knowledge to improve the organisation's performance and to gain competitive advantage (Barquin, 2001; Coulson-Thomas, 1997; Davenport & Prusak, 2000; Despres & Chauvel, 1999; Ford & Staples, 2006; Fuller, 2002; Gottschalk, 1999; Ives, Torrey & Gordon, 1998; Liebowitz & Beckman, 1998; Malhotra, 1998; Metaxiotis, Ergazakis & Psarras, 2005; Storey & Barnett, 2000; Sveiby, 1997; Tiwana, 2000; Tsai & Lee, 2006; Turban & Aronson, 2001; Wiig, 1997; Zack, 1999). This all-encompassing working definition of knowledge management shall be adopted for this study.

In general, there are two broad approaches to knowledge management. One approach focuses on the "hard" aspects of knowledge management while the other looks at its "soft" aspects (Mason & Pauleen, 2003). The "hard" aspect of knowledge management looks at the deployment and use of information technologies to enable knowledge management activities to be conducted within the organisation (Mason & Pauleen, 2003). Sveiby (1997) argued that the management of information is a crucial factor in knowledge management; whereby he viewed knowledge as objects that can be handled by information technologies.

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The goal of this "hard" approach to knowledge management is to increase access to knowledge through enhanced methods of access and reuse in hypertext linking, databases and searches (Malhotra, 2000; Tiwana, 2000; Turban & Aronson, 2001). New information technologies like networks, groupware, data mining and data warehouses are key solutions that drive this approach (Sveiby, 1997; Tiwana, 2000). The "hard" view is based on the idea that voluminous amounts of knowledge harnessed through technology will make knowledge management work in the organisation (Malhotra, 2000; Sveiby, 1997; Tiwana, 2000; Turban & Aronson, 2001).

The "soft" aspect, on the other hand, investigates the capture and transformation of knowledge into a corporate asset by the organisation (Mason & Pauleen, 2003). This approach views knowledge as a process composed of a complex set of dynamic skills and know-how that is constantly evolving and changing. As such, it views the knowledge problem as being largely a management issue which can be solved via creativity and innovation in the organisation resulting in what is termed as a "learning organisation" (Mason & Pauleen, 2003).

As opposed to the "hard" view of knowledge management, the "soft" approach requires a holistic view of the organisation and acknowledges that is necessary to get employees to share what they know to make knowledge management work (Gupta & Govindarajan, 2000). More importantly, it stresses that it is not the technology that makes knowledge management work; instead, it is the processes and environment that matter most (Gupta & Govindarajan, 2000; Mason & Pauleen, 2003; Spiegler, 2000). As such, this study specifically examined the "soft" aspects of knowledge management, in particular, the cultural factors that take on the role of facilitators.

THE FRAMEWORK

Knowledge management is undoubtedly a crucial activity that needs to be effectively exercised by organisations the world over. In Malaysia, knowledge management has been identified to be a key factor in ensuring organisational success. Prior studies have highlighted the importance and benefits to local organisations (Asleena Helmi, 2002; Badruddin A. Rahman, 2004a, 2004b; Bank Negara Malaysia, 2005;

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Bontis, Chua & Richardson, 2000; Chong & Amat Taap Manshor, 2003; Hafizi Muhamad Ali & Zawiyah Mohammad Yusof, 2004; Hishamuddin Md Som *et al.*, 2004; Ndubisi, 2004; Niza Adila Hamzah & Woods, 2004). Among the key reasons identified for the importance of knowledge management to Malaysian organisations is the need for organisations to develop new areas of growth in knowledge-intensive areas in view of the nation's shift to the knowledge economy (Bank Negara Malaysia, 2005; Ramanathan Narayanan, Richardson, & Abdul Latif Salleh, 2003). The need to harness knowledge possessed by organisations is brought about by the fact that reliance on manufactured goods and the export of traditional commodities will not be sufficient to generate future growth for the Malaysian economy (Bank Negara Malaysia, 2005).

In order for organisations to remain competitive and for Malaysia to effectively compete for foreign direct investment, there is a need for a smooth transition from a labour and technology intensive economy to a knowledge-based economy (Yu, 2003). Yu (2003) stressed the need for many factors to allow this smooth transition, one of which is the need for knowledge management practices adopted by organisations in the country to be aligned with the overall business environment in which they operate in. A thorough examination of knowledge management practices in Malaysia is required to ensure the competitive advantage of knowledge and its manipulation (Ko, 2003; Nonaka & Takeuchi, 1995).

Understanding knowledge management within the Malaysian context is difficult as there have been very little published work on it. In addition, a majority of the work written on knowledge management in Malaysia tend to be conceptual or theoretical with no primary research being conducted. Some of these papers attempted to achieve prescribing measures that have been found to be successful in other countries without fully understanding what is happening within the local context. However, some of the empirical research conducted has indicated that some key differences exist in managing knowledge in Malaysia.

One of the earliest studies on knowledge management in Malaysia indicated that Malaysian organisations tend to be slow in the uptake of knowledge management and that levels of knowledge management are still in the infancy stage (Salleh Yahya, Lailawati Mohd Salleh & Goh, 2001). Within the manufacturing sector, it was found that knowledge

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sharing is done at a moderate level and there exist significant relationship between organisational culture and technology with knowledge sharing (Hishamuddin Md Som, Low & Zaleha, 2002).

A subsequent study by Rumesh Kumar (2003) among electrical and electronics-based organisations in Malaysia revealed that there is no clear explicit and identifiable knowledge management strategy in place. This finding is crucial as these organisations would not be able to sustain their efforts in knowledge management which requires an alignment of an explicitly identified knowledge management strategy with the organisation's vision, mission and structure (Hishamuddin Md Som, Low & Zaleha, 2002; Rumesh Kumar, 2003; Tiwana, 2000).

The primary challenge faced by organisations in Malaysia is changing the employees' behaviour and practices. Apart from this, it is difficult for organisations to retain talented employees leading to knowledge loss (Ramanathan Narayanan, Richardson & Abdul Latif Salleh, 2003). It was also found that organisations in Malaysia tend to be highly bureaucratic and have a centralised decision-making structure with lower levels of knowledge management applications and systems in place (Hishamuddin Md Som *et al.*, 2004; Ramanathan Narayanan, Richardson & Abdul Latif Salleh, 2003). Furthermore, Malaysian organisations that operate in more competitive environments tend to have more comprehensive knowledge management systems in place (Hishamuddin Md Som *et al.*, 2004; Ramanathan Narayanan, Richardson & Abdul Latif Salleh, 2003).

A study on knowledge management in 25 award-winning Malaysian organisations revealed that there is greater awareness on the need for, and importance of, knowledge management (Tan, 2004). These organisations have also taken steps to incorporate knowledge management concepts within their organisations but these measures tend to take on a more "human-oriented" approach that focuses on the sharing of tacit knowledge which may prove to be unsustainable in the long term (Rumesh Kumar, 2003; Tan, 2004).

Despite there being some research on knowledge management in the past few years, none has specifically looked at the MSC status companies. In addition, almost all prior research utilised survey questionnaires based on foreign studies which may not be fully

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applicable to the Malaysian context at this exploratory stage of research (Hishamuddin Md Som, Low & Zaleha, 2002; Ko, 2003; Ramanathan Narayanan, Richardson & Abdul Latif Salleh, 2003; Rumesh Kumar, 2003; Tan, 2004). Due to these reasons and the fragmented and scant amount of literature on knowledge management practice in Malaysia, it is imperative that studies on knowledge management practice in Malaysia be conducted. Furthermore, the move by the Malaysian government in transforming Malaysia's economy to one that is knowledge-driven and with its bold MSC initiative currently in progress, it is necessary to understand the impact of cultural enablers on knowledge management practice among MSC status companies in Malaysia. Based on the need to understand this, the research question identified for this study was as follows: how do cultural factors affect knowledge management practices in MSC status companies in Malaysia?

Knowledge management enablers are organisational mechanisms for fostering knowledge consistently; they stimulate knowledge creation, protect and facilitate knowledge sharing within an organisation (Lee & Choi, 2003; Turban & Aronson, 2001). Culture defines not only the value of knowledge but also the internal organisation of this knowledge for sustained competitive advantage (van Zolingen, Streumer & Stoker, 2001). An appropriate culture should be established within the organisation to encourage employees to create and then to share knowledge amongst themselves (Lee & Choi, 2003). Creating and sustaining this sharing culture is not an easy task and requires the cooperation of all parties.

Although many cultural factors have been identified in the literature, a majority of these factors were based on western countries and environments which are different from the Asian context (Chan & Ng, 2003; Chaudry, 2005). Studies need to be conducted in Malaysia to determine the role of these cultural factors. The cultural factors that were identified in the literature are collaboration, mutual trust, learning, leadership and incentives/rewards.

Collaboration is an important feature in knowledge management adoption. It is defined as the degree to which people in a group actively assist one another in their task (Hurley & Hult, 1998; Lee & Choi, 2003). A collaborative culture in the workplace influences knowledge

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management as it allows for increased levels of knowledge exchange, which is a prerequisite for knowledge creation. This is made possible because collaborative culture eliminates common barriers to knowledge exchange by reducing fear and increasing openness in teams (Lee & Choi, 2003). Collaboration between team members also tightens individual differences which can help shape a shared understanding about the organisation's environments through supportive and reflective communication (Fahey & Prusak, 1998). Without shared understanding among team members, very few knowledge creation activities are conducted (Fahey & Prusak, 1998; Lee & Choi, 2003).

Mutual trust exists in an organisation when its members believe in the integrity, character and ability of each other (Robbins, 1998; Robbins *et al.*, 2001). Mutual trust has been an important factor in high performance teams as explained in organisational behaviour literature. The existence of mutual trust in an organisation facilitates open, substantive and influential knowledge exchange (Abrams *et al.*, 2003; Lin, 2006; Nahapiet & Ghoshal, 1998; O'Dell & Grayson, 1999; Robbins, 1998; Robertson & Hammersley, 2000; Shapiro, 1987). When team relationships have a high level of mutual trust, members are more willing to engage in knowledge exchange (Mayer, Davis & Schoorman, 1995; Nahapiet & Ghoshal, 1998; Robbins, 1998; Shapiro, 1987).

It has been found that low levels of mutual trust is a key barrier to knowledge exchange in teams (Szulanski, 1996). When knowledge exchange activities can be increased via mutual trust, knowledge creation occurs (Lee & Choi, 2003; Takeuchi & Nonaka, 2004). Trust encourages an environment that promotes knowledge creation as it reduces the fear of risk. Hence, high levels of trust can reduce this risk in teams (Lee & Choi, 2003). When team members trust one another, they are less apprehensive to share ideas and thoughts with each other, sparking off a spiral of knowledge creation through the SECI process (Takeuchi & Nonaka, 2004). However, Robbins (1998) cautions that although trust may take a long time to build, it can be easily destroyed and would therefore require careful attention by management.

Learning is defined as "any relatively permanent change in behaviour that occurs as a result of experience" (Robbins *et al.*, 2001: 124). In organisations, learning involves the dynamics and processes of collective learning that occur both naturally and in a planned manner

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within the organisation (Millet & Marsh, 2001; Robbins *et al.*, 2001). Learning is crucial in knowledge management as it provides an avenue for the organisation to be infused with new knowledge (Lee & Choi, 2003; Nonaka & Takeuchi, 1995; See, 2002). With an emphasis on learning and continuous development, organisations knowledge creation activities will increase and employees can play an active role in the process (Lee & Choi, 2003). Lee and Choi (2003) posited that for successful knowledge creation to occur, organisations should develop a deeply ingrained learning culture and have education, training and mentoring programmes available to encourage learning. In addition to that, it is important for the organisation to have tolerance for mistakes and view them as opportunities for learning and problem solving (van Zolingen, Streumer & Stoker, 2001).

Developing and maintaining organisational learning capabilities are critical for guaranteeing core competence enhancement and sustained competitive advantage for the organisation (Simonin, 1997). This has been demonstrated by an empirical study by See (2002) who found that organisational learning culture is a key factor in predicting knowledge creation activities which consequently affect organisational performance.

Leadership is often stated to be a driver for effective knowledge management in organisations (Ambrosio, 2000; Crawford, 2003; Hishamuddin Md Som *et al.*, 2004; King, Marks, & McCoy, 2002; Mohamed Khalifa & Liu, 2003; Peyman Akhavan, Mostafa Jafari & Mohammad Fathian, 2005; Yu, Kim & Kim, 2004). Leadership is defined as the ability to influence and develop individuals and teams to achieve goals that have been set by the organisation (Robbins, 1998; Robbins *et al.*, 2001; Wood *et al.*, 1998).

According to Yu, Kim and Kim (2004), adequate leadership can exert substantial influence on organisational members' knowledge creation activities. The presence of a management champion for the knowledge management initiative will set the overall direction for knowledge management programmes and assume accountability for them; this is crucial to effective knowledge management (Yu, Kim & Kim, 2004). In many organisations, this champion is often the Chief Knowledge Officer (CKO) or Chief Information Officer (CIO) (Mohamed Khalifa & Liu, 2003). More specifically, leaders can be categorised as being

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transactional or transformational (Robbins *et al.*, 2001). The former refers to leaders who guide and motivate subordinates in the direction of established goals by clarifying role and task requirements (Robbins *et al.*, 2001; Wood *et al.*, 1998). On the other hand, transformational leaders are those who possess charisma and provide individualised consideration and intellectual stimulation to subordinates (Robbins *et al.*, 2001; Wood *et al.*, 1998). Studies have shown that transformational leadership is strongly correlated to knowledge management (Crawford, 2003). Failure in ensuring adequate leadership appears to have resulted in the failure of many knowledge management initiatives (Ambrosio, 2000).

Incentives and rewards that encourage knowledge management activities amongst employees play an important role as an enabler (Bartol & Srivastava, 2002; Bock & Kim, 2002, 2003; Ko, 2003; Robertson & Hammersley, 2000; Yu, Kim & Kim, 2004). Incentives are things that have the ability to incite determination or action by employees in an organisation (Robbins, 1998; Robbins *et al.*, 2001). Rewards, on the other hand, can be broadly categorised as being either extrinsic or intrinsic (Wood *et al.*, 1998). Extrinsic rewards are positively valued work outcomes that are given to the employee in the work setting whilst intrinsic rewards are positively valued work outcomes that are received by the employee directly as a result of task performance (Wood *et al.*, 1998). It is found that both intrinsic and extrinsic rewards have a positive influence on knowledge management performance in organisations (Yu, Kim & Kim, 2004).

However, some contradictory arguments over the effects of rewards in knowledge management exist. It was found that artificial or extrinsic rewards that are not supported by the culture of the organisation are likely to be ineffective and may lead to employee cynicism (O'Dell & Grayson, 1998). Knowledge sharing activities within the organisation are said to be negatively impacted by "expected" rewards of employees, hence thwarting knowledge management activities in the organisation (Bock & Kim, 2002, 2003).

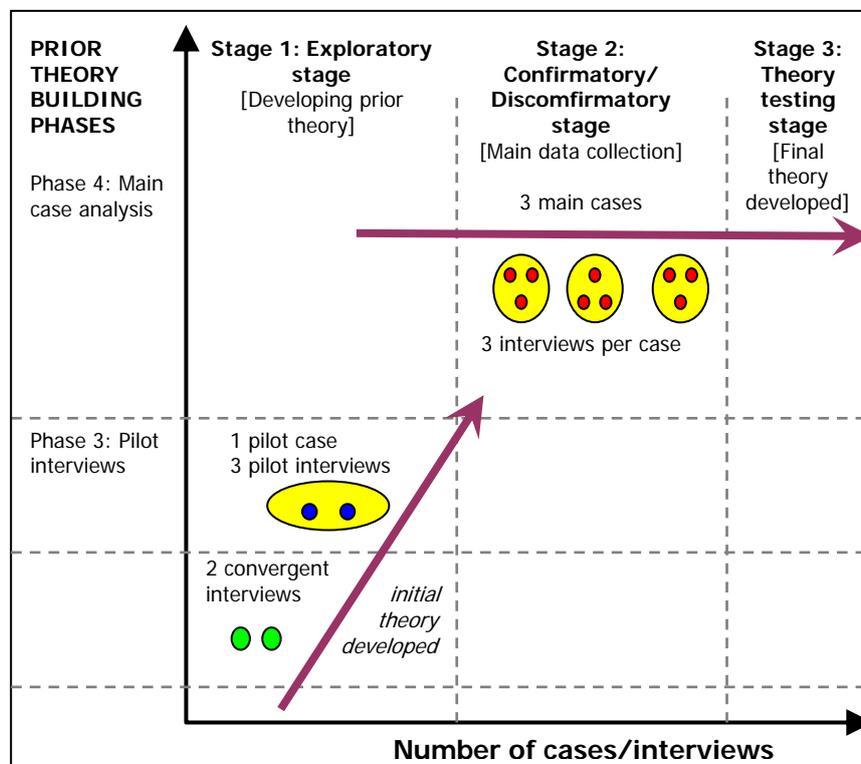
THE RESEARCH DESIGN

This research utilised an exploratory research design via the qualitative multiple-case study research approach within the realism paradigm (Perry, Riege & Brown, 1999; Yin, 1994). The selection of the research methodology was influenced by the research problem and its corresponding research questions, and the current state of this field of study as indicated in the literature review (Carson *et al.*, 2001; McPhail, 2003; Perry, 2001; Yin, 1994; Zikmund, 2000). In view of the limited amount of literature covering cultural factors affecting knowledge management in Malaysia, there is little precedence and direction to explore the research problem identified for this study using empirical or quantitative methods.

Due to the contemporary nature of this study as opposed to being a historical one, it is appropriate to use of the case study method. The case study method explores and analyses real-life issues in their own setting and uses a wide variety of evidence (McPhail, 2003; Perry, 2001; Yin, 1994). These include the use of in-depth interviews, internal documentation, corporate literature, websites, articles in magazines and newspapers to provide a basis for extensive and thorough discussion of the research problem (Perry, 2001; Perry & Coote, 1996). This study was divided into four phases which spans over three stages as illustrated in Figure 1. It gives an overview of the process of establishing a prior theory through a largely inductive and convergent stage, followed by a confirmatory or disconfirmatory stage encompassing the main cases before developing a final theory in the third stage of the research (Chew, 2001; McPhail, 2003; Stehle, 2004).

Literature review. A well-defined research problem is required before the researcher can commence the process of research design and subsequent data collection (Yin, 1994). To achieve this, the prior theory on knowledge management practice used for this study was derived from the review of the existing literature in academic journals, books, conference proceedings, dissertations and practitioner magazines (Darke, Shanks & Broadbent, 1998; McPhail, 2003; Perry, 2001). Based on the review, existing constructs and theories were elicited and they formed the foundation upon which the research problem was formulated (Darke, Shanks & Broadbent, 1998; Perry, 1998, 2001).

Exploratory convergent interviews. Using the prior theory gathered earlier, two exploratory convergent interviews with experts in the field were then used to develop the research questions and the interview questions that formed the core of the initial interview protocol. These largely unstructured, conversational interviews were geared towards building on the literature findings and contrasting them so as to better structure the confirmatory stages of the main cases (Carson *et al.*, 2001; Perry, 2001).



(Adapted from: Perry & Coote, 1996: 14; Stehle, 2004: 64; Teale, 1999: 140)

The pilot case study. Next, three pilot interviews were conducted to improve the data collection processes prior to the commencement of the main case studies (Yin, 1994). These pilot interviews served as a "dress rehearsal", in which the intended data collection plan was used as faithfully as possible as a final test run (Perry, 2001; Yin, 1994). For this study, two pilot interviews were conducted in the selected pilot case

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located in Selangor, Malaysia, that is, a large MSC status company in the field of computing technology. This pilot case was selected to ensure that it was similar to those analysed in the main case analysis (McPhail, 2003).

Main case analysis. Nine in-depth interviews were conducted in the main case study stage, with three interviews being conducted in each main case. For each case, an IT manager or CIO/CKO, an executive level IT personnel and an executive level business personnel were interviewed using the case study protocol which was developed and refined in the exploratory convergent interviews and pilot case study stages. The interviews commenced with open and general questions, and later, focused on identified issues based on the three research questions formulated for this study (Perry, 2001). In short, the use of multiple case studies and multiple sources of evidence allowed for a more complete understanding of the phenomenon in question apart from affording the ability to triangulate and validate the results emanating from the research (Yin, 1994).

FINDINGS AND DISCUSSION

Four case studies with three interviews each were conducted. These four cases can be divided into two distinct phases – one conducted in the pilot case study involving three interviews, and three main cases for the main data collection stage with three interviews conducted per case, giving a total of nine interviews in this stage. All these cases in the main data collection stage are established MSC status companies and are able to provide formal consent to their participation in this study as required by the University of Southern Queensland (USQ) Human Research Ethics Committee. The structure of the cases allows for analysis along various patterns and clusters (Miles & Huberman, 1994). Comparisons are made within each main case, between responses from each participant within each main case and cross case analyses which involves analysing clusters that emerged during data collection (Miles & Huberman, 1994). Details of each of the pilot and main cases are detailed in the following section.

Case P

This is a *Fortune 100* multinational company that specialises in communication solutions. It provides seamless mobility products and solutions across broadband, embedded systems and wireless networks. It has its operations in Malaysia for over 30 years and employs a very skilled and diverse workforce in its plants in Malaysia. It focuses on transforming innovative ideas into products that connect people the world over. It employs over 60,000 persons all over the world with approximately 2,000 employees in its Malaysian-based operations in several states.

Case A

This is a medium-sized company that has been in existence for less than 10 years. It specialises in web-based solutions and develops applications to suit the needs of its clients. It provides a comprehensive range of services ranging from consulting, planning, conceptualisation, design, development, deployment and maintenance of web-based applications for organisations across the globe. With a highly-educated and skilled workforce, this company has a very informal structure and encourages maximum interaction amongst employees. Due to the nature of the work it does, knowledge management activities are crucial to its success and competitive advantage.

Case B

This multinational company is one of the world's leading providers of Internet, broadband network and enterprise business solutions dedicated to meeting the specialised needs of a diverse and global base of customers. Constantly ranked as one of the world's top patent producing companies, this company delivers tailored solutions in the fields of computing, networking and electronic devices. It offers a complete range of notebook and desktop computers for personal and enterprise use. It is a global multinational company with approximately 300 employees in its Malaysian-based operations which spans over several states with customer service centres located in every major Malaysian city. It is ISO 9001:2000 certified and has a functional organisational structure with clear reporting lines in place to ensure that the company operates effectively and efficiently.

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Case C

This is a large multinational company that deals with chemical products and operates in many countries across the globe. It has long been the leading supplier of outstanding products and services to a range of different industries and is often regarded as the first choice of organisations. Further, this company is also involved in trading, business and operational consultancies with a very strong research and development focus. Its main aim is to meet the needs of society in ways that are economically, socially and environmentally viable. It employs over 100,000 persons all over the world with approximately 2,000 employees in its Malaysian-based operations which spans across the entire country. It has a matrix reporting structure with its operations standardised across the globe.

Based on the data gathered from the main cases which was then analysed, the cultural factors and their impact on knowledge management practice were discussed in turn.

Collaboration. The literature suggests that collaboration is an important enabler in knowledge management which leads to increased levels of knowledge exchange and knowledge creation (Hurley & Hult, 1998; Lee & Choi, 2003). The findings confirmed this as all cases indicated that collaboration plays an important role in facilitating knowledge management. However, visible differences did exist among these cases with regard to helpfulness, collaboration across organisational units and willingness to accept failure. Case A which is smaller in size has high levels of collaboration as staff members need to work closely with each other to get projects completed on time. Apart from this, the management promotes a family-like work ethos which is based on mutual respect and individual accountability which create the correct environment for collaboration amongst staff members. In Cases B and C which are larger in size, there is a tendency to avoid taking responsibility for failure due to their organisational structure and the need for self-preservation by staff members which is closely aligned to the *kiasu* (afraid to lose) phenomenon that is common in certain East Asian cultures.

The findings also suggested that collaboration between team members can strengthen bonds and bridge individual differences which will help

shape a shared understanding of the organisation and its goals. Organisational culture and size play important roles in the determining the level of collaboration as observed from the findings. Smaller, less-formal and value-rich organisations like Case A have higher levels of collaboration compared to the larger and more competitive organisations of Cases B and C which demonstrate the need for individual self-preservation, hence the existence of the individualistic *kiasu* culture. *Kiasu*-ism effectively deters employees from sharing knowledge and leads to knowledge hoarding which hampers knowledge management.

Mutual trust. The findings from the study confirmed that mutual trust is an enabler of knowledge management as suggested in the literature (Nahapiet & Ghoshal, 1998; O'Dell & Grayson, 1999; Robertson & Hammersley, 2000; Shapiro, 1987; Szulanski, 1996; Takeuchi & Nonaka, 2004). In all three cases, mutual trust can be seen as being the facilitator for open, substantive and influential knowledge exchange which leads to knowledge creation (Abrams *et al.*, 2003; Lee & Choi, 2003; Mayer, Davis & Schoorman, 1995; Nahapiet & Ghoshal, 1998; O'Dell & Grayson, 1999; Robertson & Hammersley, 2000; Shapiro, 1987). Although mutual trust is acknowledged by all respondents as being a crucial component to effective knowledge management, some respondents find that mutual trust is difficult to cultivate and maintain as suggested by Robbins (1998).

Organisational size does affect the level of mutual trust experienced in an organisation. Case A, which is relatively small with a close-knit organisational culture, experiences a high level of mutual trust whilst the larger Cases B and C have lower levels of mutual trust. In the larger cases such as Case C, organisational policies such as the forced-ranking system results in employees looking out for themselves unless personal relationships are formed. Due to organisational policies and the highly competitive environment of the larger organisations, *kiasu*-ism emerges just like in the case of collaboration.

Based on the findings of this research, the *kiasu* culture which was not known to be an enabler in the literature on knowledge management practice in Malaysia, is found to be an important factor affecting knowledge management practice. The *kiasu* culture or "afraid to lose" mentality is a distinct character in some East Asian cultures, which is predominantly attributed to Singaporean society (Chaudry, 2005; Ho,

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2006; Tong, 2006). Whilst *kiasu*-ism is found to be a factor in some studies on knowledge management in Singapore (Chaudry, 2005; Chu *et al.*, 2004; Ho, 2006; Tong, 2006), it has never been known to be a factor in the Malaysian-based studies. One reason for this can be that most of the studies in Malaysia replicate the research instruments developed in Western contexts, resulting in *kiasu*-ism not emerging as an inhibitor.

Learning. The literature suggests that learning is a facilitator of knowledge management that allows an organisation to be infused with new knowledge and it stimulates knowledge creation activities (Lee & Choi, 2003; Nonaka & Takeuchi, 1995; See, 2002). In all three cases, learning is recognised as an enabler of knowledge management. All cases have some form of training programmes in place for staff members as they value the importance of learning in enhancing the knowledge and performance of their employees. These training programmes include in-house training and external training sessions. Job rotation is practised in Case C – the organisation has an online open resourcing system that allows current staff members to search for placements in other job positions in any of its branches worldwide. Case C believes that the exposure and opportunity to work in another country or in another position would motivate employees to work harder and would also enrich their experience and that of their home branch upon the completion of the job placement. This would in turn ensure that they remain competitive in the market as suggested by Simonin (1997).

Mistakes are regarded as part and parcel of learning in these organisations and are viewed constructively. This is in support of the literature that posits that a tolerance for mistakes is required and that mistakes should be viewed as an opportunity for learning and problem solving, often resulting in the creation of new knowledge (van Zolingen, Streumer & Stoker, 2001).

Leadership. All cases recognised the importance of leadership in ensuring that the knowledge management effort is effectively managed in the organisation. This is in support of the literature which states that leadership is a key driver for effective knowledge management and the absence of adequate leadership appears to have resulted in the failure of many knowledge management initiatives (Ambrosio, 2000; Crawford, 2003; Hishamuddin Md Som *et al.*, 2004; King, Marks & McCoy, 2002; Mohamed Khalifa & Liu, 2003; Peyman Akhavan, Mostafa Jafari &

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Mohammad Fathian, 2005; Yu, Kim & Kim, 2004). Although a knowledge management champion exists in each of the cases studied, their exact roles vary. In Case B, the CEO acts as the key champion with departmental heads playing an associate role in championing knowledge management in their respective departments. Case C has an enterprise-wide CIO who is the knowledge management champion but this person's leadership can hardly be seen at the middle and lower levels of the organisational hierarchy. This shows that the knowledge management leadership in these organisations is not systematically structured and executed, and is hardly visible at the middle and lower levels of the organisation.

With regard to the type of leadership style, all three cases have knowledge management champions who are transactional leaders who guide and motivate subordinates in the direction of established goals by clarifying role and task requirements (Robbins *et al.*, 2001; Wood *et al.*, 1998). This is in contrast with the literature which states that transformational leaders are strongly correlated with effective knowledge management and competitive advantage (Crawford, 2003). Although the knowledge management champions in all these cases are transactional leaders, they are performing a good job as their knowledge management initiatives in their respective organisations are functioning well and these organisations are leaders in their respective industries.

Incentives and rewards. The findings from this study confirm the assertion made in the literature which states that incentives and rewards encourage knowledge management activities (Bartol & Srivastava, 2002; Bock & Kim, 2002, 2003; Ko, 2003; Robertson & Hammersley, 2000; Yu, Kim & Kim, 2004). All three cases indicate that incentives and rewards have a positive effect on knowledge management activities in their respective organisations. In Cases A and B, the incentives and rewards that employees derive from practising knowledge management are mainly intrinsic in nature. Some form of extrinsic rewards such as bonuses, increments and discounts are still available to employees in Cases A and B. However, staff members in Cases A and B value the intrinsic rewards and satisfaction that they obtain from practising knowledge management and are of the opinion that the extrinsic rewards that are currently in place in their organisations are not attractive to employees and have not been adjusted to cater to knowledge management activities that occur these days. This supports the view by

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O'Dell and Grayson (1998) that artificial or extrinsic rewards that are not supported by the culture of the organisation are likely to be ineffective. As such, the extrinsic reward structures must be closely aligned to the knowledge management efforts on an organisation in order for it to be effective.

Tying in extrinsic rewards to knowledge management activities is effectively executed in Case C which has a forced-ranking system and "Enterprise First" programme. In Case C, employees practise knowledge management as a means of self-preservation which eliminates the intrinsic factor of the rewards. The findings of this study suggest that incentives and rewards do play a crucial role in facilitating knowledge management. Hence, organisations would need to decide on the appropriate level of incentives or rewards based on their organisational setting and priorities to ensure that they yield the desired effect that is in line with their knowledge management plans.

Kiasu-ism results from the mentality that "knowledge is power" and job insecurities in addition to competition among peers which lead to the hoarding of knowledge by employees for self-preservation (Chaudry, 2005). This results in employees being unwilling to share knowledge as they fear that they may lose their "exclusiveness" in doing so (Chaudry, 2005). *Kiasu-ism* has a wide ranging effect on organisational culture as it would impact on collaboration and mutual trust as seen from the findings of this study. As such, management would need to consider implementing measures such as providing incentives and promoting teamwork to encourage staff members to collaborate with each other more openly and to foster mutual trust (Chaudry, 2005). In short, due attention to mutual trust is required to ensure that effective knowledge sharing occurs within an organisation.

CONCLUSION

This study has made several key contributions by identifying a number of significant cultural knowledge management enablers within the Malaysian context. It has found collaboration, mutual trust, learning, leadership, incentives and rewards to be significant facilitators to knowledge management practice in MSC status companies in Malaysia. Apart from that, the knowledge management champions in these

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organisations practise transactional leadership styles and are yet very effective in promulgating a conducive environment for knowledge management. *Kiasu*-ism is a new variable discovered in this study, an inhibitor to knowledge management. This cultural issue needs to be adequately addressed by management to ensure that it does not impede on the creation and transfer of knowledge within the organisation. In short, cultural factors do play a crucial role in determining the outcome of knowledge management efforts and would therefore require the adequate attention and consideration by organisations intending to practise knowledge management activities. Neglecting these "soft" issues and focusing only on the "hard" technological issues may not yield the results that the organisation wishes to attain. Further research on *kiasu*-ism is suggested to further understand its wider implications to ensure effective deployment of knowledge management initiatives in Malaysia.

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