IMPLEMENTATION OF KNOWLEDGE MANAGEMENT IN SMALL AND MEDIUM ENTERPRISES (SMEs), KUCHING.

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IMPLEMENTATION OF KNOWLEDGE MANAGEMENT IN SMALL AND MEDIUM ENTERPRISES (SMEs), KUCHING.

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A dissertation submitted in partial fulfillment of the requirements for the degree of Corporate Master in Business Administration

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2012
STATEMENT OF ORIGINALITY

I hereby declare that this dissertation is based on my original work except for quotations, references and citations which have been duly acknowledged.

Dated Submitted

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ABSTRACT

This study aims to explore in the subject of implementation of Knowledge Management in Small and Medium Enterprises (SMEs) in Kuching, Sarawak. The objectives of this study are to identify level of awareness of Knowledge Management and factors affecting the implementation of Knowledge Management in SMEs. Conceptual framework was developed based on literatures. Empirical evaluation was designed with refer to conceptual framework. The questionnaires were responded by top management through self-administered method from 34 companies under services sector including ICT in SMEs who insisted implementing Knowledge Management in their organization. Descriptive statistic, correlation and multiple regression analysis were employed to analyze the collected data. In this study, the results from descriptive statistic analysis revealed that there is high level of awareness of Knowledge Management amongst the respondents. Based on correlation analysis, there is statistically significant, positively high degree of relationship between awareness and implementation of Knowledge Management in SMEs. However, the result from multiple regression analysis showed that awareness, management leadership and support, strategy and purpose and training and education deemed most dominant factors towards implementation of Knowledge Management of SMEs in Kuching.
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CHAPTER 1

INTRODUCTION

1.0 Introduction

A rapid development of economy in the country is ascertain by substantial increase of interest for individual entrepreneurship, the formation and advancement of networks, computerization in management and operation system and internationalization of trade activities.

Small and Medium Enterprises (SMEs) have potential to contribute substantially to the economy and provide a strong foundation for the growth of new industries as well as strengthening existing ones and country’s future development. SMEs make substantial contributions to national economies and are estimated to account for 80 percent of global economic growth (Pavic et al., 2007).

SMEs remain the backbone of economy in the region and contribute to the region’s export. In order to achieve high-income statue by year 2020, SMEs become important source of growth in the country economy. Potential workforce will determine the success of the company from start-up, expansion, modernization and technological acquisition. The most important is innovative.

In addition, SMEs needs to rise to challenge of having the capability, capacity and flexibility to meet changing demand patterns both domestically and abroad and competition from regional firms. Since Human Capital Development is expected to further spur the development of business startups and increase the supply of skilled and
knowledge workers, SMEs need to improve on capacity by investing in appropriate new technologies and intensifying the ongoing training of human resources (National SME Development Council, 2007).

Hylton (2002) indicates that SMEs are in need of Knowledge Management just as much as large enterprises. The reasons cited are that the world has change rapidly over past decade and continues to do so. There are more contenders for every dollar or profit, which put great pressure on companies, large and small, to innovate and to develop products rapidly. Both innovation and rapid development required accelerated use of knowledge, knowledge that must be managed efficiently, effectively and securely.

As Malaysia embarks on the journey to become a high-income and knowledge-based nation as envisioned in the New Economic Model, the role of small and medium enterprises (SMEs) in economic growth has become more important than ever. Globalization and liberalization of markets have shown that businesses can no longer continue as usual. This indeed is a defining moment for SMEs as they shift into a higher gear and transform business operations in order to reaffirm their significant in the new environment (National SME Development Council, 2009/10).

1.1 SMEs and Knowledge Management

Definition of SMEs varies from country to country. In Malaysia, SMEs fall into three categories. There are Micro, Small, or Medium. These groupings are decided based on either the numbers of people a business employs (Table 1) or on the total sales or revenue generated by a business in a year (Table 2).
Table 1: Categorization of Malaysian SMEs Based on Number of Employees

<table>
<thead>
<tr>
<th></th>
<th>Primary Agriculture</th>
<th>Manufacturing (including Agro-based) &amp; MRS*</th>
<th>Service Sector (including ICT**)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro</td>
<td>Less than 5</td>
<td>Less than 5</td>
<td>Less than 5</td>
</tr>
<tr>
<td>Small</td>
<td>Between 5-19</td>
<td>Between 5-50</td>
<td>Between 5-19</td>
</tr>
<tr>
<td>Medium</td>
<td>Between 20-50</td>
<td>Between 51-150</td>
<td>Between 20-50</td>
</tr>
</tbody>
</table>

Table 2: Categorization of Malaysian SMEs Based on Annual Sales Turnover

<table>
<thead>
<tr>
<th></th>
<th>Primary Agriculture</th>
<th>Manufacturing (including Agro-based) &amp; MRS*</th>
<th>Service Sector (including ICT**)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro</td>
<td>Less than RM200,000</td>
<td>Less than RM250,000</td>
<td>Less than RM200,000</td>
</tr>
<tr>
<td>Small</td>
<td>More than RM200,000 &amp; Less than RM1,000,000</td>
<td>More than RM250,000 &amp; Less than RM10,000,000</td>
<td>More than RM200,000 &amp; Less than RM1,000,000</td>
</tr>
<tr>
<td>Medium</td>
<td>Between RM1,000,000 &amp; RM5,000,000</td>
<td>Between RM10,000,000 &amp; RM25,000,000</td>
<td>Between RM1,000,000 &amp; RM5,000,000</td>
</tr>
</tbody>
</table>

*MRS: Manufacturing-Related Services

**ICT: Information and Communication Technology

Source: http://www.smeinfo.com.my

SMEs have long been recognized as the backbone to any economy as they have been an important generator of employment and growth. Similarly in Malaysia, SMEs account for about 99% of total business establishments and contribute to 31% of the nation’s Gross Domestic Product (GDP). SMEs’ shares to total
employment and exports of the country are 56% and 19% respectively. Going forward in order for Malaysia to achieve a developed nation and high income status, domestic SMEs are expected to be an important driver of growth. The focus in the New Economic Model and Tenth Malaysia Plan would be to unleash the untapped potential of SMEs and to transform these entities to be more competitive and resilient to the changing business environment (National SME Development Council, 2009/10).

Based on the Census on Establishment and Enterprises 2005 conducted by the Department of Statistics Malaysia (DOSM), SMEs in Malaysia are mainly in the services sector, accounting for 87% or 474,706 of total business establishments. Most of these businesses are involved in the distributive trade which includes wholesale and retail, as well as hotels and restaurants. The manufacturing sector, meanwhile accounts for 7% of total SMEs or a total of 39,373 businesses, of which more than half are in the three key subsectors, namely textiles and apparels, metal products and food and beverages (F&B). This is followed by the agriculture sector which constitutes another 6% of SMEs or representing 34,188 businesses. Most SMEs in the agriculture sector are involved in crop plantation, horticulture and fishing (National SME Development Council, 2009/10).

According to Organization for Economic Cooperation and Development (OECD) (2000), SMEs make-up the largest proportion of businesses all over the world and play tremendous roles in employment generation, provision of goods and services, creating a better standard of living, as well as immensely contributing to the gross domestic products (GDPs) of many countries.
SMEs' contain various advantages in income growth, entrepreneurial training, creation of technological capabilities, greater flexibility to changing market circumstances, job creation and lower wage inequality and dispersion of industry away from urban areas and regional development (Berry, 1998; Katrak and Strange, 2002).

Small businesses have contributed many innovative ideas and technological breakthroughs to our society (Davidson and Griffin, 2003). In order to maintain and develop further their innovative skills SMEs need to develop their understanding of Knowledge Management, as a key business driver rather than as a resource-intensive additional initiative (Zanjani et al., 2008).

Egbu (2001) identified the strengths and weaknesses of SMEs. The strengths of SMEs are its less formal strategies increase the communication of knowledge, speed of decision making and improve informal networks, its informal network improve employees commitment and their receptiveness of Knowledge Management regimes and SMEs able to react faster to changing market requirements and the requisite knowledge to satisfy market needs.

The weaknesses identify by Egbu (2001) are SMEs inability to fund long-term and risky knowledge management programs, weakness in specialized range of technological competencies and weakness in investment on training and education. Other weaknesses identified by Rothwell and Dodgson (1994) are that SMEs has little management experience, power imbalance if they are to collaborate with large firms, difficulty in coping with complex regulations and associated cost of compliance.
Today business environment has become more competitive than ever before, therefore knowledge in this competitive environment is thought to become primary resource for organizations. The conventional factors of production have become secondary. It is straightforward to obtain them, provided there is knowledge (Chen et al., 2006). However, the terminology of knowledge management was not widely used until the middle of the nineties (Chaw et al., 2003).

Salleh and Goh’s (2002) definition of knowledge management where it is a process of leveraging knowledge as means of achieving innovation in process and products/services, effective decision-making, and organizational adaptation to the market for creating business value and generating a competitive advantage to organizations.

Knowledge Management is about making the right knowledge available to the right people. It is about making sure that an organization can learn, and that it will be able to retrieve and use its knowledge assets in current applications as they are needed (Drucker, 1999).

The potential which Knowledge Management offers in improving efficiency and innovation has been cited as a key source of competitive advantage (MacKinnon et al., 2002). The coordination and exploitation of organizational knowledge resources is to create benefit and competitive advantage (Drucker, 1999).

Knowledge management encompasses everything the organization does to make knowledge available to the business, thus it is complex and multifaceted. This includes embedding key information in systems and processes, applying incentives to motivate employees and forging alliances to infuse the business with new knowledge. Effective
knowledge management requires a combination of many organizational elements such as technology, human resource practices, organizational structure and culture.

Nonaka and Takeuchi (1995) suggest that knowledge, unlike information, is about beliefs and commitment. However, Ashton (1998) and Earl (2001) argue that knowledge needs to be captured and codified as much as possible in order to exploit and leverage it for the organization’s benefit. Codification in organizations converts knowledge into accessible and applicable formats. When Knowledge users categorize knowledge, describe, map and model it, then it can be simulated and embedded in the business rules and processes.

Knowledge can be divided into two categories: tacit and explicit. Explicit knowledge refers to the knowledge which can be articulated in formal language such as grammatical statements, mathematical expressions, specifications, manuals, and thus can be transmitted across individuals formally and easily. On the contrary, tacit knowledge refers to the knowledge which is hard to articulate with formal language, but is personal knowledge embedded in individual experience and involves intangible factors such as personal belief, perspective, and value systems (David, 2006; Nonaka & Takeuchi, 1995). Figure 1 below shows the dynamic interaction between Tacit and Explicit knowledge.
Knowledge Management is a systematic process for acquiring, organizing, sustaining, applying, sharing and renewing both the tacit and explicit knowledge of employees to enhance organizational performance and create value (Boh, 2007). Pilania (2006c) defined Knowledge Management as a systemic, organized, explicit and deliberate ongoing process of creating, disseminating, applying, renewing and updating the knowledge for achieving organizational objectives. Knowledge Management is a process
which involves the management of explicit and tacit knowledge (Nonaka & Takeuchi, 1995). Angus and Patel (n.d) describe a four-process view of knowledge management that has put into a table 3.

Table 3: Four Process View of Knowledge Management

<table>
<thead>
<tr>
<th>This major process...</th>
<th>Includes these activities....</th>
</tr>
</thead>
</table>
| Gathering             | • Data entry  
                          • OCR and scanning  
                          • Voice input  
                          • Pulling information from various sources  
                          • Searching for information to include |
| Organizing            | • Cataloging  
                          • Indexing  
                          • Filtering  
                          • Linking |
| Refining              | • Contextualizing  
                          • Collaborating  
                          • Compacting  
                          • Projecting  
                          • Mining |
| Disseminating         | • Flow  
                          • Sharing  
                          • Alert  
                          • Push |

Source: SearchDomino.com. (n.d.)
A knowledge management plan involves a survey of corporate goals and a close examination of the tools, both traditional and technical that is required for addressing the needs of the company. The challenge is to select or build software that fits the context of the overall plan and encourage employees to share information (SearchDomino.com., n.d.).

Like many emerging business processes rooted in technology, Knowledge Management is defined differently by different organizations and by different individuals within the organizations.

According to Geospatial Information & Technology Association (GITA) (2005), benefits of Knowledge Management can be organized into four major categories.

i) Decrease cost – reuse products, learning from failures, faster integration of new employees, reduce training cost

ii) Save time – avoid redundant work, faster access, optimize communication and collaboration

iii) Improve quality – leverage worldwide competence, best practices and quality solutions, faster innovation through quality methods

iv) Increase sales – higher average hourly rate for better quality, improve billability by reducing business development, remote access for sales, selling Knowledge Management know-how to customers.
1.2 Theoretical Framework

A new generation of thoughts is beginning to replace current focus on Tacit – Explicit knowledge conversion (SECI model) and emphasis on efficient provision of knowledge under business process reengineering (BPR) initiatives which bring a new simplicity base in understanding the nature of knowledge. This third age generation of Knowledge Management adopts paradoxical nature of knowledge as both “thing” and “flow” and looks of such aspects in new and different ways. It is vital to manage not only the content but the process and context of knowledge.

SECI Model

Nonaka and Takeuchi (1995) propose SECI model (Figure 2) of the knowledge creating process to understand the dynamic nature of knowledge creation and to manage such a process effectively. There is a spiral of knowledge involved in their model, where the explicit and tacit knowledge interact with each other in a continuous process – socialization, externalization, combination and internalization. This process leads to creation of new knowledge. The central thought of the model is that knowledge held by individuals is shared with other individuals so it interconnects to a new knowledge. The spiral of knowledge or the amount of knowledge grows all the time when more rounds are done in the model. The dynamic nature of knowledge and knowledge creation provides a framework for management of the relevant processes.
Collison and Parcell’s Knowledge Management model (2001) illustrated the process and flow knowledge management in the organization as shown in figure 3.

At first, individual and teams agree with a set of goals. They use their knowledge to achieve the target and create value to the organisation. Second process is focus on using knowledge circle consists of learning before, learning during and learning after to inspire the organisation after the significant activity. This includes a simple leaning process like assisting colleague, retrospect and after action review. This helps to elicit the new knowledge for individuals instead of knowledge remained in the heads of individual. This process allows individual or group of peoples in knowledge sharing. Third, all this learning activity need to be connected to “Knowledge Bank”. For instance, individual withdraw of knowledge from “Knowledge Bank” for learning before doing and deposit
knowledge after learning. Fourth, capturing and distill the knowledge is crucial at this process to link the key and insight of knowledge in people and networks. Besides, it encourages individual or teams to own and update any knowledge which is made explicit. Lastly, the environment or culture within the organisation surrounds the model. It is critical at started point and sustain of knowledge sharing. This will be reflected in the right leadership behavior and the way knowledge rooted in the core processes that will create value and core competencies to the organisation (12management.com)

Figure 3: The Collison and Parcell’s Knowledge Management Model

Source: 12manage.com
The Collison and Parcell’s Knowledge Management Model emphasised a distinctive feature on learning process over the entire Knowledge Management function. This learning process take place in three dimensions there are learning before, learning during and learning after.

This can be linked to the Organisational Learning Theory (Argrys and Chron, 1996), which is the extension from the Espoused Theory and Theory In-Use. This theory stated every individual learns in the organisation. According to Argrys and Chron (1996), Organisational Learning is a product of organisational inquiry. Organisational Learning Theory is dependent on allowing organisational inquiry take place according to Theory In-Use. This means that whatever expected outcome differs from actual outcome, individual or teams will engage in inquiry to understand and solve for the inconsistent of the outcomes. Employees are encouraged interact with each other for instead to give, grow, develop, support and enhance their skills and capabilities which important in contribute to creative and innovative of their knowledge.

Communication engages a significant role in a learning organisation. Employees in an organisation are free to inquire about others ideas, approaches, opinions and concepts. However, mutual respect, trust, empathy and sense of belonging also play a vital role in learning organisation. Argrys and Chron (1996), identify three level of learning, there are single loop learning, double loop learning and deutero learning. Effective learning must includes all these learning process. This can be relate to Senge’s concept of learning organisation, leaders are designers, stewards and teachers. They responsible in improving learning process, expand of employee’s capabilities, understand complexity, clarify vision and share mental model (Senge et al., 2000). Levitt and March (1996) expand their
view of dynamic Organisational Learning Theory where organisation as routine-based, history dependent and target oriented.

The implementation of Knowledge Management might require a change such as change in practices, IT and learning behavior of employees in an organization. Lewin (1951) in Change Theory introduced three (3) step change model of unfreezing, change and refreeze which means prior learning to be rejected and replaced. Lippitt, et al. (1958) extended Lewin’s Three-Step Change Theory by created a seven-step theory that focuses more on the role and responsibility of the change agent than on the evolution of the change itself. Robbin (2003) Social learning theory or social cognitive theory proposed that behavior change is affected by environmental influences, personal factors, and attributes of the behavior itself.

Schein (1999) described further detail of Lewin’s change theory with comprehensive model of change called “cognitive redefinition”. Stage 1 is unfreezing, Schein explained human behavior is established by past observational learning and culture influences. Three sub-processes such as dissatisfaction of present conditions, previous belief and learning anxiety will determine the readiness and motivation to change. Stage 2 is unfrozen and moving to a new state which means identify what exactly need to be change. Three (3) possible impacts from processing new information, there are words take on new or expanded meaning, concepts are interpreted within a broader context and an adjustment in the scale used in evaluating new input. Stage 3 is refreezing, where new behavior becomes habitual. This includes developing a new self-concept and establishing new interpersonal relationships.