

Criteria for Measuring Knowledge Management Performance Outcomes in Organisations

Chong Siong Choy

Faculty of Business and Law

*Multimedia University, Jalan Ayer Keroh Lama, 75450 Melaka
Tel : 06-2523606, Fax : 06-2318869, E-mail : scchong@mmu.edu.my*

ABSTRACT

While many criteria for measuring KM performance outcomes have been proposed, no attempt has been made to provide a comprehensive set of widely accepted criteria and/or benefits associated with KM efforts. This paper seeks to fill the gap by investigating all the criteria proposed in previous research. A framework is proposed in which KM initiatives consist of five dimensions. The appropriate implementation of activities of these dimensions could result in the achievement of KM outcomes. The findings have important implications to organisations on how their KM efforts can be systematically managed and measured for business success.

Keywords

Knowledge management; Measurement criteria; Benefits of knowledge management; Knowledge management outcomes

1.0 INTRODUCTION

The current economy is characterised by increasing competitiveness of the business environment, leaner organisations, products and services convergence and vast development of technology (Davenport & Prusak, 1998). All these issues have implied that effective management of knowledge has become a critical factor for organisational success. Organisations not only have to continue learning, but are also forced to learn at a faster rate in order to remain successful at the forefront of their business endeavours.

With respect to these developments, the importance of knowledge management (KM) and the measurement of intangible assets have raised the interest of many researchers and practitioners. This is evident from the drastic increase of the numbers of publications related to these areas (von Krogh, Nonaka & Aben, 2001). This is not surprising as various empirical and theoretical evidences have proven KM to be a key source of

competitive advantage and subsequently leading to organisational success. From the practical side, previous literatures have also indicated that many organisations have attempted to invest in KM initiatives, and Malaysian companies are of no exception. For example, a study by Chong (2006a) indicates that 58.5 percent of the Malaysian IT companies have made significant investments in KM while 21 percent of the organisations plan to invest in KM within a year. Another study by Chong and Yeow (2005) also indicates that 59 percent of the 289 middle managers from Malaysian telecommunication companies surveyed view their business as knowledge intensive.

However, recent survey evidences show that, while many claim that KM is implemented in their organisations, not many of them are considered successful in their KM efforts (Chong, 2006a; Chong & Yeow, 2005; Takeuchi, 1998). This problem is largely attributed to the missing link between KM implementation and performance outcomes (Hallet & Stephens, 2003; Longbottom & Chourides, 2003; Marr, 2003). In other words, there are no well-developed performance measures within the organisations surveyed to assess the value of their knowledge assets. It is therefore timely to assess and identify a list of criteria that can be used to systematically measure KM implementation. With the development of a comprehensive set of criteria, organisations are in better position to manage their knowledge and hence competitive advantage and business success are assured.

The next section presents the research problems related to the issues under study, followed by definition of KM. The relationship between KM and KM performance outcomes is then explored. Section 5 provides extensive review of literature in identifying list of criteria of KM performance outcomes and/or benefits that have garnered impressive theoretical and empirical support. Based on the list of outcomes, the dimensions on how KM can be implemented are proposed. Section 6 concludes the study with research implications and suggestions.

2.0 KM IMPLEMENTATION PROBLEMS

The problems associated with KM implementation seem to be a universal phenomenon. Chong (2006a) and Chong and Yeow (2005) in their investigation on KM implementation in Malaysian organisations consistently found that there are significant gaps between perceived importance and implementation of KM critical success factors (CSFs) presented to the managers, indicating that the Malaysian companies surveyed are not practising KM to the level they are expected to. This problem is also prevalent in developed countries such as U.S. Even though prior studies show that successful large companies that practice KM tops the *Fortune 500* list and smaller companies top *Inc. 100 Hot Companies to Watch* list, this evidence is not conclusive. A study by Takeuchi (1998) on a poll of executives from 80 large companies in the U.S. found that only a few executives felt that they manage their knowledge well.

These findings may imply that the current KM solutions are still ad hoc, constrained by basic rigid and limited views of knowledge and lack the necessary zeal and dynamics to meet the knowledge requirements of organisations in today's competitive environment (Malhorta, 1998). This contention is further supported by Gubbins (2003) where he claims that the biggest problem with KM is lack of focus where there are lots of grand visions proposed but with little practicality. Marr (2003) provides evidence that many organisations have narrow focus on KM, linking it to information management associated with technological solutions, such as Intranet and databases. As such, their KM practices and thus the expected outcomes will have a narrow focus.

Hallett and Stephens (2003) contend that organisations need to address the issue of KM paradox, i.e. failure of organisations to refine their performance measures to consider the impact of KM activities even though these activities increase the cost of doing business. Further evidence were provided by Longbottom and Chourides (2001) where they reported that even though KM has been acknowledged to improve organisational performance, there are no well-developed performance measures within the organisations surveyed to assess the value of their knowledge assets.

This problem might be attributed to the absence of a universally accepted definition of KM. There is not yet a common consensus on the definition and concept of KM (Earl, 1999). Defining KM is especially difficult, as different perspectives or schools of KM (for example, management information systems, management theory, psychology and so on) can yield different dimensions and meaning (Salleh & Goh, 2002). Thus, different perspectives on the concepts of knowledge can lead to

different definitions of KM and therefore it is not surprising that the expected outcomes of KM efforts are defined differently.

Further, academic development of KM has not stabilised and filtered into industry. Although KM has been understood as a management tool used to improve efficiency, effectiveness and innovation, organised and commonly accepted KM principles are yet to be developed (Stankosky & Baldanza, 2001). This is because organisations usually implement well-established practices (Levette & Guenov, 2000).

As a result, lack of understanding of KM has presented a challenge to organisations to see how their KM efforts can be appropriately implemented and measured. This has presented major obstacles to organisations towards implementing KM (Bassi & Van Buren, 1999). Since KM implementation requires an investment decision, many organisations have either made less investment or do not invest at all in KM. All these are attributed to the poorly defined KM purposes and performance outcomes.

Liebowitz (1999) contends that there is a critical need for formal and well-organised KM development within enterprises. By establishing a set of criteria to measure KM performance outcomes, companies are clear about the pre-requisites needed to deploy a full-range KM programme on the base of its expected outcomes. With a set of criteria in mind, this would eventually lead to proper, well-organised KM initiatives within organisations. However, before the criteria are identified, it is important to understand the definition of KM. The next section presents a selected number of KM definitions related to the current study.

3.0 DEFINITION OF KM

A review of literature has revealed that there is not yet a common consensus on the concept of KM. To date there is no universal accepted definition of KM as different researchers and practitioners tend to define KM based on their fields and interests (Choi, 2000). However, as Call (2005) describes, none of the definitions of KM are completely accurate, nor are they completely inaccurate. Some selected KM definitions are presented below:

- a) "Systematic approach to find, understand and use knowledge to create value" (O'Dell, 1996).
- b) "Systematic, explicit, and deliberate building, renewal and application of knowledge to maximise knowledge-related effectiveness of an enterprise and return from its knowledge assets" (Wiig, 1997).
- c) "Process of capturing collective expertise of an enterprise wherever it resides and distributing to wherever it can to provide performance enhancements" (Hibbard, 1997).

- d) “An explicit control and management of knowledge within an enterprise aimed at achieving enterprise objectives” (van der Spek & Spijkervet, 1997).
- e) “A conscious strategy of getting the right knowledge to the right people at the right time and helping people share and put information into action in ways that strive to improve organisational performance” [American Productivity and Quality Centre (APQC), 1999].
- f) “Formalisation of and access to experience, knowledge and expertise that create new capabilities, enable superior performance, encourage innovation and enhance customer value” (Buckman, 1999).
- g) “Systematic management of organisational knowledge which involves the processes of creating, gathering, organising, store, diffusing, use and exploitation of knowledge for creating business value and generating competitive advantage” (Chong & Choi, 2005).

While the above presents different definitions of KM that have been proposed by various researchers, the similarity that every definition provides is that KM leads to better organisational performance, implying that there is consensus between KM efforts and organisational success. Since this paper investigates the criteria for measuring KM performance outcomes, the definition proposed by Chong and Choi (2005) will be adopted. Having identified the definitions of KM, the next section reviews the literature on KM and measurement of performance outcomes.

4.0 MEASUREMENT OF KM OUTCOMES

There has been increasing recognition on the importance of intangible assets to the performance of an organisation. As Drucker (1995) describes, the “soft” aspects (expertise, experience and patents) are more permanent than manpower, buildings and equipments. Frederick, Beatie and McIlroy (1999) and Marr, Mountsen and Bukh’s (2003) studies in which only 5 percent of Microsoft’s market value is explained by its balance sheet indicate the increasing importance of knowledge-based intangible assets.

As such, regardless of whether the organisations are manufacturing or service based, large or small and medium, they are beginning to investigate how these intangible knowledge assets or intellectual assets can serve as the basis for competitive advantage (Stewart, 1994) and growth (Salorjavi, Furu & Sveiby, 2005). All these imply that the value of an organisation in the k economy has to be based on intellectual capital, and thus, using financial measures alone cannot measure intellectual capital adequately (Bixler, 2000; Chong &

Choi, 2005). This is because traditional management and measurement techniques that focus only on financial performance can be misleading and counter productive in a development environment (Ellis, 1997).

Hence, it is imperative to adopt other measurement tools that could accurately determine the performance of a knowledge-based company. Carneiro (2001) suggests that besides financial performance, organisations can measure some of its intangible assets and use non-financial ratios or indicators for measuring management efficiency. According to Bassi and Van Buren (1999), the intellectual assets of a firm include not only the employees’ know-how, but also its business processes and customer knowledge as well.

Taking the cues from the above, this paper investigates the “soft” measures and/or intangible benefits resulting from KM efforts in a systematic way based on the review of literature. Such measures are then translated into criteria in which KM performance outcomes can be assessed. The following section presents a comprehensive review of literature on the soft measures as criteria for measuring KM performance outcomes as have been proposed by numerous researchers and practitioners.

4.0 CRITERION FOR MEASURING KM PERFORMANCE OUTCOMES

The Oxford Advanced Learner’s Dictionary of Current English (1988) defines criterion as “standard of judgement; principle by which something is measured for value”. The same dictionary defines “outcome” as “effect or result of event, or of circumstances”. As such, from the KM perspective, criteria can be defined as the effect or intended results which stem from KM efforts. Intended results obviously refer to measurement of success of KM initiatives that has value to the organisation concerned. Whatever the criterion or methods used, it should be agreeable and acceptable by those who are involved in using them. It is important for criteria to be determined before any KM efforts take place because results cannot be determined without criteria. By identifying them, metrics and benchmarks can be developed to measure the success associated with KM efforts.

In the literature, different terms have been used to describe criteria, among them: “benefits”, “performance measures” or “measures”, “metrics”, “strategies”, “values”, “outcomes” and “rewards”. However, “criteria”, “benefits” and “outcomes” are the most widely accepted terms in academic literature as well as trade literature. As such, this study uses the terms interchangeably to describe how they could be used in assessing KM initiatives.

At this juncture, it is important to further refine the definition of “criteria” in measuring KM initiatives. As success in this k-economy has to be based on the evaluation of intangible

assets of an organisation, thus, “criteria” can be best defined as “soft” measures in which outcomes or benefits from KM implementation can be measured. In other words, the economic model in valuing the criteria is not available. This is consistent with earlier findings that financial measures alone cannot measure such management paradigm as KM (Bixler, 2000; Bukowitz & Williams, 2000; Chong & Choi, 2005; Ellis, 1997).

Based on the extensive review of literature, there have been some efforts in developing criteria for measuring KM performance. For example, KPMG (1999) has surveyed 423 organisations in the Europe and U.S. and identified 14 benefits of KM. They are: better decision making; better customer handling; faster response to key business issues; improved employee skills; improved productivity; increased profits; sharing best practices; reduced costs; new or better ways of working; increased market share; creation of new business opportunities; improved new product development; better staff attraction/retention; and increased share price.

According to Allee (1997), there are six benefits of KM implementation: sharing best practices; new or better ways of working; improved communication and improved learning/capability to adapt. In addition, increased innovation and enhanced intellectual capital were identified as benefits of KM implementation in addition to the list presented by KPMG.

Ruggles (1998) identifies better decision making; sharing best practices; new or better ways of working as some of the benefits of KM initiatives. In addition, he also adds two new benefits to the list; improved learning/capability to adapt and entry into different market types.

Wiig (2000) found that the benefits of KM implementation include increased profits; reduced costs; new business opportunities creation; improved new product development; enhanced product or service quality and creation of values to customers. In addition, he found that increased market size and increased empowerment of employees are two other benefits of a KM initiative.

Ofek and Savary (2001) found that reduced costs; together with enhanced product and service quality and creation of value to customers as the competitive advantage brought about by KM. Longbottom et al. (2003) found nine benefits of KM initiatives, among them, faster response to key business issues; sharing best practices; reduced cost; new or better ways of working; creation of new business opportunities; improved new product development; enhanced product or service quality and creation of value to customers. In addition,

improved communication has also been identified as one of the benefits of KM initiatives.

More recent evidences are provided by Egbu, Hari and Renukappa (2005) and Chong (2006b). Egbu and his colleagues in a study on small and medium surveying firms identified twenty two benefits resulting from KM implementation: improved ability to sustain competitive advantage of an organisation; immediate results in solving organisation-wide problems; improved organisational productivity in delivering services to clients; development and constant improvement of competitive long-range service and technology strategies; improvements in the quality of an organisation's work force, through capacity building and upskilling; stimulation and motivation of employees; formalised knowledge transfer system can be established (best practices, lessons learned); improved capture and use of knowledge from sources outside the firm; improved integration of knowledge within the firm; better on-the-job training of employees; enhanced client relations - better client interaction; development of culture for organisational growth and success; improved employee retention; enhanced business development and the creation of opportunities for organisations; and enhanced and streamlined internal administrative processes, enhancing performance and productivity by solving emerging organisational problems; fostering innovation and services; enabling identification of knowledge gaps; identifying knowledge flow; identifying knowledge assets; improving efficiency and sharing knowledge with clients.

Chong (2006b) found that there are fifteen benefits of KM, stimulation and motivation of employees; formalised knowledge transfer system established; better on-the-job training for employees; enhanced company innovation and creativity; improved overall company performance; better client interaction; development of entrepreneurial (intrapreneurial culture) for enterprise growth and success; improved employee retention; improved ability to sustain competitive advantage; enhanced transfer of knowledge from one employee to another; means to identify industry best practices; better methods for enterprise-wide problem solving; enhance the development of business strategies; enhance business development and creation of company opportunities; and enhanced and streamlined internal administrative process. He found that all the fifteen benefits have been rated by the middle managers of Malaysian IT companies as very important measurement of the success of a KM programme.

In short, 38 criteria in measuring KM performance outcomes have been identified from the literature above. They are listed below:

1. Better decision making
2. Better customer handling through better client interaction and sharing knowledge with clients

3. Faster response to key business issues
4. Immediate results in solving organisational-wide problems
5. Development and constant improvement of competitive long-range service and technology strategies
6. Development of entrepreneurial (intrapreneurial) culture for organisational growth and success
7. Improved employee skills and quality through capacity building and upskilling
8. Improved productivity in delivering products and services to clients and by solving emerging organisational problems
9. Increased profits
10. Identifying and sharing best practices
11. Reduced costs
12. New or better ways of working
13. Increased market share
14. Enhanced business development and creation of new business opportunities
15. Improved new product development
16. Stimulation and motivation of employees
17. Better staff attraction/retention
18. Increased share price
19. Enhanced product or service quality
20. Creation of more value to customers
21. Enhanced intellectual capital
22. Improved communication
23. Increased innovation and creativity
24. Improved efficiency
25. Improved learning/adaptation capability
26. Return on investment in KM efforts
27. Increased market size
28. Entry into different market type
29. Increased empowerment of employees
30. Improved capture and use of knowledge from sources outside the firm
31. Improved integration of knowledge within the firm
32. Enabled identification of knowledge gaps
33. Identified knowledge assets
34. Identified knowledge flow
35. Formalised knowledge transfer system established which enhance transfer of knowledge between one employee to another
36. Enhanced and streamlined internal administrative processes
37. Better on-the-job training of employees
38. Improved ability to sustain competitive advantage

Having identified the criteria for measuring KM performance outcomes, the next section discusses the dimensions of which criteria for measuring KM efforts are systematically organised.

5.0 DISCUSSION AND IMPLICATIONS

In general, the criteria for measuring KM efforts can be grouped into five dimensions: (1) systematic knowledge activities; (2) employee development; (3) customer satisfaction; (4) good external relationship; and (5) organisational success. The following sub-sections explain each of the dimensions in detail.

5.1 Systematic knowledge activities

Knowledge activities include the processes of creating, gathering, organising, diffusing, use, exploitation, transfer and storage of vital knowledge of an organisation. It requires turning personal knowledge into corporate knowledge that can be widely shared throughout an organisation and appropriately applied (Skyrme, 1997). It is a conscious strategy of getting the right knowledge to the right people at the right time and helping people share and put information into action in ways that strive to improve organisational performance (APQC, 1999).

Through effective knowledge processes, *knowledge assets can be identified*. Further, *knowledge flows can be examined* and subsequently *knowledge gaps can be identified* so that measures can be taken to close the gaps. Important knowledge can be exploited for the organisations to benefit from the use of such processes. For example, *formalised knowledge transfer system can be established* in which ways to *capture, integrate and use of knowledge are improved*. With *improved communication*, this enables *sharing of best practices* across the organisation. Such sharing *improves employee skills* and their *productivity*. This is translated through *creative and innovative approaches to completing a work or task*. Through the documentation of an organisation's vital knowledge, *better decisions can be made*. All in all, it *improves learning* and *facilitates an organisation's adaptation* towards the changing environment.

5.2 Employee development

Intellectual capital focuses more on capturing the best judgement and experiences of today's employees, termed as knowledge workers (Chong & Choi, 2005). It is a composite of knowledge, information, intellectual property and experience owned by the members of an organisation who come to work in the morning and go home at the end of the day. When these employees leave an organisation for good, they bring valuable knowledge and experience with them, leaving their previous organisations at the losing end.

Problems faced by organisations can be resolved through KM where employee involvement and commitment are emphasised. Brand (1998) proposes that people have to be motivated to access and share information and to convert that information into knowledge. Employees are required to

collaborate with others to share their knowledge and expertise. The focus of business and KM application is on providing an environment in which knowledge workers of various disciplines can come together and create new knowledge (Binney, 2001). By agreeing on common presumptions and analytical frameworks, employee can co-ordinate diverse sets of activities and solve organisation-wide complex problems (Bhatt, 2000).

As such, an effective management of knowledge benefits organisational members as far as their current jobs and future developments are concerned. With an effective knowledge process, *communication is improved* between employees and knowledge can be *effectively transferred to and among employees*. This *improves employee learning and enhances their skills*. All these lead to *improved innovation and creativity* among the employees. Employees not only are performing meaningful tasks with adequate knowledge in hand, they are also able to *work effectively in teams and empowered to make decisions* on their daily tasks. As such, *improved efficiency* would lead to *faster responses to organisational key issues and immediate results in solving organisational-wide problems*.

In addition, *better on-the-job training programme can be developed* based on the mission-critical skills needed by an organisation based on the available knowledge of the employees' skills and abilities. Proper utilisation of knowledge also enables employees to identify new products and services in which the organisation has the potential to offer to its customers, resulting in the *development of entrepreneurial culture for organisation growth and success*.

All these results in better *stimulation and motivation among the employees* and thus, an organisation can *better retain their employees*. Further, this also serves as *attraction to outside candidates to join the organisation*.

5.3 Good external relationship

Reliable, useful, up-to-date and timely knowledge can be created and shared not only internally but also externally. That is, knowledge should be captured and created by sharing knowledge with business partners and suppliers. There must be a well-established knowledge structure, which includes knowledge about business partners and suppliers in order to for KM to be implemented successfully (Choi, 2000; Chong & Choi, 2005).

An effective management of knowledge thus allows sharing of knowledge between the organisation and its business partners and suppliers. Feedback from business partners and suppliers *increases the innovative and creative capacity* of the organisation, and thus *product and service quality can be improved*. Further, *new*

product development is possible. All these benefits allow the *creation of more value to customers*.

5.4 Customer satisfaction

The intellectual assets of a firm include not only employees' know-how but also business processes and customer knowledge as well (Bassi & Van Buren, 1999). In fact, one of the main goals of KM is to manage and enhance relationship with existing and new customers (Roos, Roos, Edvinsson & Dragonetti, 1998). Companies must understand that their client's problems and needs are paramount and that they are the primary driver of continuous improvements and innovation (Stankosky, 2000). Clients now demand products and services to be better, faster and more affordable (Kotter, 1996).

As such, with an effective management of knowledge processes in place, it *enhances client interaction* with the company. This *enables better customer handling* as organisations know the needs and requirements of their customers better. *Quality of products and services can be enhanced and productivity in delivering products and services to customers are improved*. All these will definitely *create more value to customers*.

5.5 Organisational success

Organisational success refers to the performance outcomes of an organisation as a result of an organisation's KM initiatives. As discussed in Section 2 of this paper, the success of a knowledge-based organisation is measured not only by looking at its financial performance, but also the intangible assets owned by the firm. This is because financial performance alone cannot measure intellectual capital adequately (Bassi & Van Buren, 1999; Bixler, 2000; Bukowitz & Williams, 2000; Carneiro, 2001; Chong & Choi, 2005; Ellis, 1997).

From the above literature, it can be concluded that organisations with effective management of knowledge are able to reap various benefits. When knowledge is well managed with proper use of information technology infrastructure as enablers, an organisation could *streamline and improve its administrative processes*. Further, *all the vital knowledge necessary to its core business are integrated* and therefore, *intellectual capital of the company is enhanced*. From the strategic point of view, an organisation could *benchmark industry best practices* and thus the *development of business strategies is enhanced*. This would allow *constant improvements of competitive long-range services and technology strategies* based on the knowledge available. As such, *new business opportunities can be identified*, including *new product development and entry into different market types*.

From the resource-based view, all these benefits allow a knowledge-based organisation to *sustain its competitive advantage*. From the financial performance point of view, effective management of knowledge allows the organisation to *increase profit and reduce cost, increase market share and market size*. All these will lead to *higher return on investment (RoI)* for companies that practice KM. As such, the company's *overall performance is improved*.

Based on the dimensions proposed, it is posited that with effective management of organisational knowledge, employees, customers and suppliers are able to benefit from the KM efforts. Eventually, this results in positive performance outcomes to the organisation. The five dimensions proposed in this study is useful to guide organisations of how knowledge can be best implemented to achieve all the criteria mentioned above.

Systematic knowledge processes involve all the knowledge processes as described by Chong and Choi (2005) in their definition of KM. To ensure organisational objectives (success) are attained, all the processes (creating, gathering, organising, store, diffusing, use and exploitation of knowledge) must be given equal attention and emphasis. While information technology (IT) helps in facilitating the knowledge processes through the development of a KM system, IT is just an enabler of KM. Successful deployment of KM requires an organisation to think in terms of applications and how people use applications; not systems and software (King, 1996).

The most critical element to any knowledge-based organisations would be human beings. KM needs to be people-centric, not technological-based (Smith & McLaughlin, 2004). In order to create an environment for knowledge to be effectively created, shared, used and retained in the organisation by its members, the critical success factors (CSFs) of KM implementation must be considered. Chong and Choi (2005) have developed a model consisting of 11 critical factors such as employee training; employee involvement; teamwork; employee empowerment; top management leadership and commitment; removal of organisational constraints; information system infrastructure; performance measurement; knowledge-friendly culture; benchmarking, and knowledge structure. The critical factors enable effective management of knowledge processes in organisations to achieve organisational performance outcomes.

In addition, organisations benefit from the knowledge gained from their customers, business partners and suppliers, which in turn, benefit stakeholders from the knowledge base of the organisation. Realising the importance of developing and delivering products and

services that meet customers' needs, organisations are increasingly using knowledge to strengthen their relationship with customers. Similarly, organisations have formed networking and strategic partnerships with their business partners, suppliers and to some extent the competitors (Bukowitz & Williams, 2000) in designing products and services that meet customers' specifications and expectations (Chong & Choi, 2005). Such relationships cannot be ignored by organisations if they want to be successful in their KM endeavours.

Ultimately, benefits of KM initiatives derived from systematic management of knowledge processes, the exploitation and sharing of knowledge among and between employees and customers, business partners and suppliers lead to improved efficiency, effectiveness and innovation of an organisation. Such soft measures are then translated into financial and non-financial gains to the organisation, such as increased market share, increased profits, reduced costs, greater ROI and sustained competitive advantage.

6.0 CONCLUSION

This paper has addressed its objectives, i.e. to provide a comprehensive set of criteria in measuring KM efforts and how organisational knowledge assets can be managed well. This aids to better understanding of KM, how it can be implemented in organisations, outcomes of KM efforts and the measurement of the outcomes. It is hoped that organisations that are yet to invest in KM will be convinced in doing so. For organisations that have already invested in KM, it is hoped that this study helps organisations in managing their knowledge in the right perspective with the performance outcomes set forth as an outline. As Wiig (1997) opines, such research would help organisations to act as intelligently as possible to secure their viabilities and overall successes by realising the best value of their knowledge assets.

In addition, it is also hoped that additional research will be undertaken to build upon this work, and to further develop and enhance knowledge on the criteria in developing performance measures of KM initiatives. This will definitely aid to better understanding of the importance of KM towards enhancing organisational performance and sustaining competitive advantage. In this era of source scarcity, KM can play a more important role as a source of competitive advantage. This work is dedicated to playing a small role in achieving these ends.

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