A conceptual breakdown structure for knowledge management benefits using meta-synthesis method

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Received 2 May 2015
Revised 23 July 2015
3 August 2015
Accepted 4 August 2015

Abstract

Purpose – *The paper aims to foster a better understanding of knowledge management (KM) benefits by integrating the qualitative findings of prior research under a multilayer conceptual framework.*

Design/methodology/approach – *A meta-synthesis approach was conducted by adopting "Noblit and Hare's" seven-step method.*

Findings – *A breakdown structure for KM benefits which encompasses 3 "macro benefits" at Level 1, 7 "benefits" at Level 2 and 44 "micro benefits" at Level 3.*

Research limitations/implications – *The main limitation is that this research does not provide criteria and measures to assess the benefits of KM.*

Practical implications – *Organizations which intend to invest in KM can obtain a better insight about outcomes and benefits of implementing KM initiatives. This study will provide those organizations which have already invested in KM with some ideas to evaluate their KM efforts qualitatively.*

Originality/value – *Based on available data, this study is the first of its kind that has identified the benefits of KM in three layers. Also, the number of KM benefits identified in this study is greater than that of any previous research.*

Keywords *Framework, Benefits, Knowledge management, Qualitative methods, Meta-synthesis*

Paper type *Research paper*

1. Introduction

In recent years, knowledge management (KM) has progressed from an emergent concept to an increasingly common function in business organizations. As evidence of its maturity as an area of academic study, an increasing number of journals have been devoted to KM and intellectual capital (IC) management has been created (Zack *et al.*, 2009). In addition to universities, KM is considered by organizations, and most of them have started their KM initiatives from the mid-1990s. However, recent survey evidences have shown that, while many organizations are claiming to have implemented KM, not many of them are considered to be successful in their KM efforts, and the expected benefits of these investments are not fulfilled (Choy *et al.*, 2006). An investment in KM is intended to improve organizational performance; therefore, it is crucial to have a clear understanding of the potential outcomes and benefits of KM (Anantatmula, 2007). An inadequate understanding of measurement and evaluation of KM outcomes is a major barrier to the success of these investments (Zack *et al.*, 2009).

Determining the high-priority KM benefits of the organization along with establishing the measures to assess the benefits are critical prerequisite to guide the knowledge efforts of the organization and to justify new investments (Choy *et al.*, 2006). A clear definition of KM benefits is essential for organizations, as it can lead to more commitment and participation of employees in the KM practice (Soliman and Spooner, 2000). Furthermore, obtaining a correct understanding of KM benefits would lead to a better understanding of KM

purposes. This will eventually help to enable organizations to practice KM from a better perspective to reap its benefits (Choy *et al.*, 2006).

Investigation of the relevant literature reveals that many researchers have emphasized the limited number of KM benefits due to their academic background and expertise, and few studies have attempted to combine and introduce all KM benefits in a unified coherent framework. Therefore, the purpose of this paper is "identification and classification of KM benefits in the form of a comprehensive framework". To achieve this aim, a meta-synthesis method was used to compare, interpret, convert and combine various existing frameworks. By providing a systematic approach through combining various qualitative studies, this method discovers new subjects and metaphors and presents a new classification of KM benefits.

2. Literature review

Despite the popularity of KM, there is no one simple definition available. Most definitions are, however, similar on one point: they take a very practical approach to knowledge, that is, how knowledge can contribute to organizational effectiveness (Edvardsson, 2009). Also, it is defined as "the collection of processes that govern the creation, dissemination and leveraging of knowledge to fulfill organizational objectives" (Pina *et al.*, 2013). In some KM implementation frameworks, this connection between KM and organizational objectives is explicit (Jarrar and Zairi, 2002; Soliman and Spooner, 2000). For example, a set of strategies for implementing KM is presented by Soliman and Spooner (2000). Among these strategies are the alignment of KM with the business objectives and the definition of the benefits of KM. However, the authors do not provide guidance on how to define those benefits (Pina *et al.*, 2013). KM maturity models also mention the need to align KM with business goals (Khatibian *et al.*, 2010; Kruger and Snyman, 2007; Mehta *et al.*, 2007), and some research also consider the issue of defining the benefits of KM (Kruger and Snyman, 2007; Mehta *et al.*, 2007). However, as with KM implementation frameworks, guidelines are neither available on how to align the goals of KM with the business objectives nor on how to define the benefits of KM (Pina *et al.*, 2013).

Benefits can simply be defined as a measurable progress. Benefit is the result and the outcome that an organization considers as profitable in terms of its nature and its value (Sowden, 2007). According to Bradley (2006), benefit is an outcome of change that is considered positive by a stakeholder. Pursuant to such a theory, Ward and Daniel (2005) define benefit as an advantage for a particular stakeholder or a group of stakeholders. The important point in these definitions is that benefits are owned by individuals or groups who are seeking the value of investments made. Hence, the KM benefit is defined as any business value that could be achieved by leveraging knowledge in organizations. Goldoni and Oliveira (2010) consider measurement of KM benefits as one of the stages of KM process. Chua and Goh (2008) believe that the evaluation of KM benefits is a complex and ambiguous issue. Not only for the reason that knowledge is an intangible asset, but it is because of the fact that little investigations have been conducted regarding the definition of KM benefits.

Most researchers have attempted to examine an approach that focuses on the financial benefits to investigate the benefits of KM, while non-financial benefits such as learning, creativity and introducing new products are ignored. The market values of many companies are higher than their accounting values due to the increased contribution of intangible assets such as knowledge (Lin and Tseng, 2005). This implies that the value of an organization in the knowledge economy has to be based on IC, and, according to Choy and Suk (2005), using financial measures alone cannot measure IC adequately.

Traditional measurement techniques that emphasize solely on financial performance can be misleading and counterproductive in a development environment (Arora, 2002). This can also be seen in organizational performance measurement literature. However,

some key models have been proposed which reflect the need to integrate both the "hard" and the "soft" dimensions of performance by integrating the knowledge and IC assessment with other traditional aspects of performance measurement. The most significant studies in this area have been carried out by Marr and Schiuma (2001), Edvinsson and Malone (1997), Roos *et al.* (1997), Brooking (1996) and Sveiby (1997). The "Knowledge Assets Map" (Marr and Schiuma, 2001), a framework of IC assessment that considers knowledge asset as a company's asset, incorporates knowledge to either acquire or produce economic benefits for the organizational system. The "Skandia Navigator System" (Edvinsson and Malone, 1997) adopts a holistic view of measurement by splitting the organizational value into financial capital and IC. The "IC-Index Approach" (Roos *et al.*, 1997) represents an attempt to assess IC holistically by consolidating IC indicators into a single index to provide a more comprehensive visualization of a company's IC. The "IC Audit Model" proposed by Brooking (1996) attempts to calculate the dollar value for the non-tangible parts of the organization called IC. Finally, the "Intangible Asset Monitor" developed by Sveiby (1997) is a method for measuring intangible assets and is a presentation format which displays a number of relevant indicators for measuring intangible assets in a simple fashion.

Hence, it is essential to adopt a measurement approach that can holistically evaluate the outcomes and benefits of KM (Arora, 2002). Carneiro (2001) suggested that besides using financial indicators, organizations can adopt non-financial ones to measure the outcomes of KM. KM benefits should be measured at all organizational levels (from strategic to operational levels). Also, the measurement of functional benefits should include a combination of individual and management actions and identify some parts of the organization with potentials for further improvements (Ahmed *et al.*, 1999).

The most important studies regarding the identification of KM benefits have been conducted by Anantatmula and Kanungo (2006) and Choy *et al.* (2006). Anantatmula and Kanungo (2006) identified a set of 26 criteria for assessing the effectiveness of KM. They also examined how these criteria interrelate with one another. The 26 criteria were presented in five groups: employee performance, organizational performance, business performance, market performance and (IC). Choy *et al.* (2006) presented a list of 38 performance outcomes of KM, and the outcomes were classified in five dimensions which are: systematic knowledge activities, employee development, customer satisfaction, good external relationship and organizational success. Zack *et al.* (2009) found that KM has a direct impact on three value disciplines:

1. customer intimacy (customer satisfaction and customer retention);
2. product leadership (innovation and rate of new product development); and
3. operational excellence (operating costs).

Becerra-Fernandez and Sabherwal (2010) presented the impact of KM on organizations in four levels: people, processes, products and organizational performance. Edvardsson and Oskarsson (2011) assessed the impact of KM on value creation in service provider organizations. They investigated the effect of KM on three fields of human capital, customer capital and innovation and concluded that KM has a positive impact on human capital through improved employee performance, a positive impact on customer capital through improved customer management and a positive impact on innovation by creating new business opportunities and improved product development.

3. Research methodology

Qualitative research has historically differed dramatically from its quantitative counterpart in terms of the ability to generalize results and, therefore, in the scope of application (Kepreotes (2009)). Noblit and Hare (1988, p. 7) proposed a new method of synthesizing qualitative research which they named meta-ethnography stating that "when we synthesize, we give meaning to the set of studies under consideration, we interpret them in

a fashion similar to an ethnographer interpreting a culture". This method has since been referred to as meta-synthesis (Kepreotes, 2009). As meta-analysis revolutionized quantitative research utilization in the 1990s, meta-synthesis has the potential to revolutionize qualitative research utilization (Sandelowski and Barroso, 2007).

A qualitative meta-synthesis integrates individual qualitative studies by bringing together and breaking down the findings of individual studies, elucidating the key features and combining these findings into a transformed whole (Holly *et al.*, 2011).

The sample for a meta-synthesis, then, is made up of individual qualitative studies selected on the basis of their relevance to the research question. Meta-synthesis is not an integrated review of qualitative literature on a given topic. Also, it is not a secondary data analysis of the primary data from the selected studies, rather it is an analysis of the findings of these studies (Zimmer, 2006). Although there are various approaches for implementation of the meta-synthesis method in social sciences, medicine and educational sciences, there is a consensus in all fields in this principle, as meta-synthesis is a useful method for the excellence of qualitative evidences in research fields (Thorne *et al.*, 2004).

The purpose of meta-synthesis is theory development, high-level summarization and generalization to provide more access to the qualitative findings for practical applications (Sandelowski and Barroso, 2007).

Considering the objectives of the current study, the paper aims to develop a comprehensive framework to unify the previous studies on KM benefits. Moreover, according to the fact that in the current study, the authors aimed to utilize the qualitative findings of prior research in this area and put forth a more comprehensive and clear vision of the concept, the meta-synthesis method can serve this purpose well. This is a flexible approach that allows the reviewers to be reflexive and critical (Sandelowski and Barroso, 2007). Also, as the literature documented for this study were mainly derived from qualitative and theoretical results, quantitative methods like meta-analysis are not a suitable approach, as meta-analysis is applicable to collections of research that are empirical rather than theoretical (Cassell and Symon, 1994).

The paper adapts Noblit and Hare's (1988) seven-step approach, which encompasses the following steps: getting started, deciding what is relevant to the initial interest, reading the studies, determining how the studies are related, translating the studies into one another, synthesizing translations and expressing the synthesis. We categorized the seven-step process into three major steps: selecting studies, synthesizing translations and presenting the synthesis.

4. Data analysis

4.1 Selecting studies (Step 1)

This step encompasses four distinct decisions and processes: formulating the review question, locating relevant studies, identifying inclusion criteria and quality assessment of included studies.

4.1.1 Formulating the review question. According to the original method, an important first step is to determine a research question that could be informed by qualitative research (Noblit and Hare, 1988). To set the research question, the first step for researchers is to focus on the "What?". The study examined the identification and classification of benefits of KM. In the next step, the question "Who?" specifies the sample. In this research, databases, scientific journals and conference papers were reviewed. In the final step, the question "When?" specifies the time frame of examined articles. Studies examined in this research ranged between 2000 and 2013. Based on the abovementioned items, the following questions guided this research:

RQ1. What are the benefits of KM discussed between 2000 and 2013?

RQ2. How can we classify the benefits of KM?

4.1.2 Locating relevant studies. The second important component of "selecting studies" involves locating potentially relevant studies. The sample examined in the meta-synthesis method consists of a series of studies that are relevant to the research question (Douglas *et al.*, 2008). At this stage, by selecting valid and relevant scientific journals and databases, as well as choosing the right keywords, a systematic search has been carried out to find the articles related to research question. Two search strategies were used to identify articles: first, a systematic search was conducted in seven electronic databases – Emerald, ScienceDirect (Elsevier), IEEE, Academic Search Premier (Ebsco), Sage Publications, Springer and ProQuest – using the key words "knowledge management" and "implementation" combined with "benefit", "performance factor", "result", "value", "outcome", "impact" and "success"; second, the reference list of articles was reviewed (backward tracking of citations) to identify additional articles. These initial search strategies resulted in the identification of 79 articles.

4.1.3 Inclusion criteria. For answering the research question, we specified a set of inclusion and exclusion criteria. Our inclusion criteria were: research papers with qualitative findings, in the English language, with emphasis on KM benefits and outcomes and published between 2000 and 2013. To obtain the articles related to the research question, a number of steps were taken. The titles and abstracts of the studies were reviewed to determine whether they shed light on the research questions and whether they met the inclusion criteria outlined for this meta-synthesis. For a full-text screening, 31 articles were maintained. After fully reviewing the remaining articles, eight were excluded, as they neither met the inclusion criteria nor addressed the research questions. At the end of this step, 23 articles remained. Then articles which did not introduce new findings by adopting qualitative methods were excluded from the meta-synthesis process. Finally, 12 qualitative studies formed the set of articles for this meta-synthesis.

In qualitative studies, sample size depends upon many factors including what the researcher wants to know, what is the purpose of the study, the references that their inclusion is useful in the study, the number of available valid resources as well as the time and resources available (Patton, 2002). In qualitative research, the sample size is evaluated based on the information given to the researcher. In this kind of studies, reaching the sample size of 12 articles or less is commonplace. If the sample obtained is precisely and systematically selected and reviewed by observing qualitative principles, it will undoubtedly cover all the information that the researcher is seeking (Lincoln and Guba, 1985).

4.1.4 Quality assessment of included studies. One of the reasons that systematic studies are recognized as to be at the highest knowledge production level is that these studies collect all the evidences related to the subject matter and then critically evaluate the gathered information. Systematic studies have predetermined goals, and, to achieve these goals, some tools and techniques are available to the researcher (Campbell *et al.*, 2003).

Critical appraisal is an important component of systematic reviews of qualitative studies, preventing inclusion of poorly conducted trials where they are likely to be biased (Atkins *et al.*, 2008). The application of quality criteria to qualitative research is widely debated, and, currently, there is no consensus on whether criteria should be applied, which criteria to use and how to apply them (Campbell *et al.*, 2003). One of the tools for quality assessment of studies is Critical Appraisal Skills Program (CASP).

The tool presents a series of questions, focused around three broad issues: rigor, credibility and relevance. Ten questions, concerning aims, methodology, design, subject recruitment, data collection, researcher–participant relationship, ethics, data analysis, statement of findings and value of research are asked. The reviewer of a study writes comments on each of these issues (Denzin, 2009). When using this tool, the reviewer allocates scores from 1 to 5 to each of the criterion (Young and Solomon, 2009).

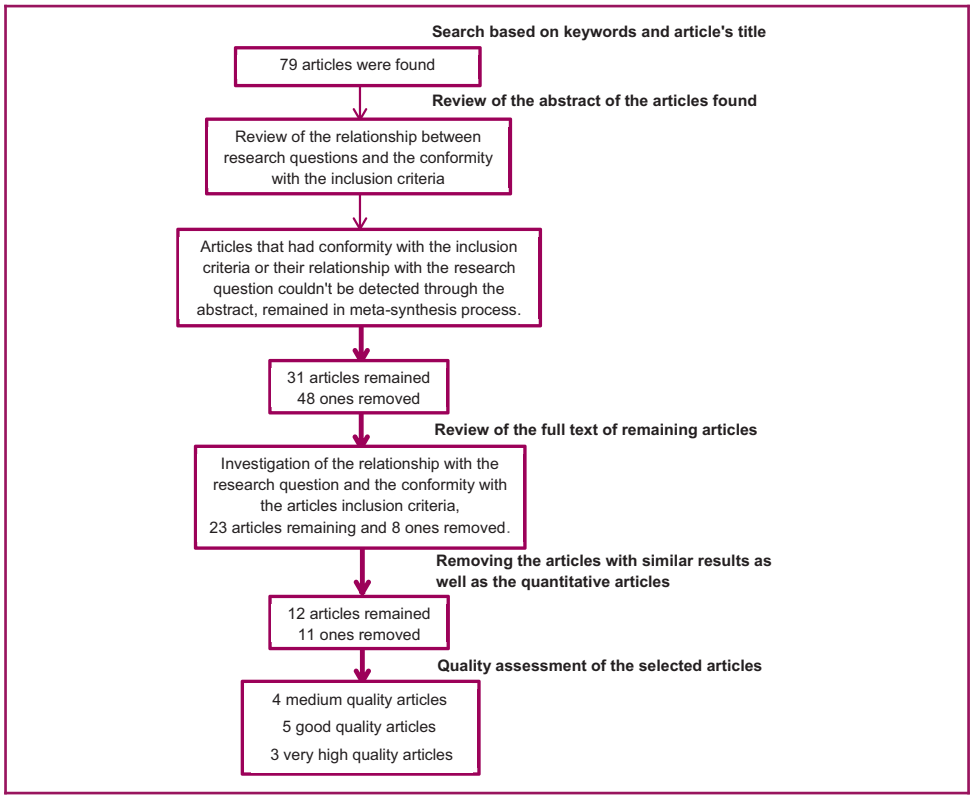
In the present study, three articles were evaluated qualitatively as very good by utilizing the CASP tool, five as good and four as average articles. Figure 1 outlines the stages of selecting the suitable articles.

4.2 Synthesizing translations (Step 2)

In this step, the both KM benefits and the findings of these resources were extracted from the text. Then, the open-coding method was used for qualitative data analysis and synthesizing of translations. This type of coding is similar to the first step of data coding in studies using the grounded theory method. In the open coding method, a code is dedicated to each of the raw findings extracted from the articles. Then, the similar codes are identified and the codes with common content are integrated and a common code is given to them (first step of coding). These codes are also called concepts. A concept is a labeled section of data that a researcher identifies as significant to some fact that the data represent. In the next stage, the relationship between the codes is identified, and the relevant codes are placed in one group and new codes are assigned to them, which form categories (second step of coding), and, finally, another code is assigned to the categories to obtain the patterns (Eaves, 2001).

In this paper, all extracted benefits derived from previous studies were considered a code, then the codes that overlapped with each other were identified and the overlays were removed. Furthermore, the codes with common content were identified, and the same codes were assigned to them. Finally, the output of this step was 44 dissimilar codes (concepts) which were called “micro benefit” in this study. Then, the micro benefits were re-investigated and similar micro benefits were placed in a subgroup, and new codes were dedicated to each of the subgroups. Seven second-order codes (categories) were identified in this stage. In other words, 44 micro benefits were classified under the seven following subgroups called “benefits”:

Figure 1 The process of search and selection of appropriate articles



1. training and learning;
2. communication and participation;
3. motivation and retention;
4. customer relationship management;
5. market management;
6. tangible performance; and
7. intangible performance

Finally, the identified benefits (categories) were re-examined and the relationships between them were identified and were classified in the form of three "macro benefit", namely, human capitals, market development and customer relationships and organizational performance. Table I refers to the benefits and micro benefits of the "human capital" macro benefit. Table II refers to the benefits and micro benefits of the "market development and customer relationships" macro benefits; and Table III refers to the benefits and micro benefits of the "organizational performance" macro benefit. Also, the final framework of meta-synthesis is presented in the research findings section.

Table I The breakdown structure of "human capital" macro benefit

Benefits	*Micro benefits*	*Sources*
Training and learning	Increased empowerment and upskilling of employees	Chen and Chen (2005), Egbu *et al.* (2005), Choy *et al.* (2006), Jennex *et al.* (2009), Goldoni and Oliveira (2010) and Edvardsson and Durst (2013)
	Better on-the-job training of employees	Egbu *et al.* (2005) and Choy *et al.* (2006)
	Improved learning curve	Wei *et al.* (2009) and Edvardsson and Durst (2013)
	Enhanced individual learning level	Choy *et al.* (2006), Goldoni and Oliveira (2010) and Edvardsson and Durst (2013)
	Improved adaptability of employees	Anantatmula and Kanungo (2006), Choy *et al.* (2006) and Wei *et al.* (2009)
	Development of innovating and entrepreneurial culture	Chen and Chen (2005), Egbu *et al.* (2005), Choy *et al.* (2006) and Goldoni and Oliveira (2010)
	Enhanced intellectual capital	Anantatmula and Kanungo (2006) and Choy *et al.* (2006)
	Enhanced organizational learning level	Goldoni and Oliveira (2010)
	Identification of knowledge flows and knowledge gaps within the firm	Egbu *et al.* (2005) and Choy *et al.* (2006)
	Improved integration of knowledge within the firm	Egbu *et al.* (2005) and Choy *et al.* (2006)
	Identifying and sharing best practices	Chourides *et al.* (2003), Jones (2003), Anantatmula and Kanungo (2006), Choy *et al.* (2006) and Goldoni and Oliveira (2010)
	Improved capture and use of knowledge from sources outside the firm	Egbu *et al.* (2005) and Choy *et al.* (2006)
Communication and participation	Improved communication among employees	Chong *et al.* (2000), Chourides *et al.* (2003), Anantatmula and Kanungo (2006), Choy *et al.* (2006) and Jennex *et al.* (2009)
	Increased employee participation and collaboration	Chong *et al.* (2000) and Anantatmula and Kanungo (2006)
	Improved coordination among employees	Zack *et al.* (2009)
	Enhanced knowledge sharing among employees	Jennex *et al.* (2009)
Motivation and retention	Increased employees motivation and satisfaction	Egbu *et al.* (2005), Choy *et al.* (2006) and Jennex *et al.* (2009)
	Identification and retention of knowledge capital	Egbu *et al.* (2005), Choy *et al.* (2006), Jennex *et al.* (2009)
	Better staff attraction and retention	Egbu *et al.* (2005) and Choy *et al.* (2006)

Table II The breakdown structure of "the market development and customer relationships" macro benefit

Benefits	*Micro benefits*	*Sources*
Customer relationship management	Development of customer relationship and better customer interaction	Chourides *et al.* (2003), Chen and Chen (2005), Egbu *et al.* (2005), Anantatmula and Kanungo (2006), Choy *et al.* (2006), Jennex *et al.* (2009) and Goldoni and Oliveira (2010)
	Improved creation of value and services to customers	Chong *et al.* (2000), Jones (2003), Anantatmula and Kanungo (2006) and Choy *et al.* (2006)
	Increased customer satisfaction	Jennex *et al.* (2009), Zack *et al.* (2009) and Edvardsson and Durst (2013)
	Reduction of customer complaints	Goldoni and Oliveira (2010)
	Customer retention	Zack *et al.* (2009)
Market management	Improved new product development	Chourides *et al.* (2003), Jones (2003), Anantatmula and Kanungo (2006), Choy *et al.* (2006) and Zack *et al.* (2009)
	Creation of new business opportunities	Chourides *et al.* (2003), Egbu *et al.* (2005), Anantatmula and Kanungo (2006), Choy *et al.* (2006) and Zack *et al.* (2009)
	Enhanced product or service quality	Chourides *et al.* (2003), Anantatmula and Kanungo (2006), Choy *et al.* (2006), Jennex *et al.* (2009), Wei *et al.* (2009) and Zack *et al.* (2009)
	Increased market share	Chen and Chen (2005), Anantatmula and Kanungo (2006) and Choy *et al.* (2006)
	Increased market size	Anantatmula and Kanungo (2006) and Choy *et al.* (2006)
	Entry into different market type	Anantatmula and Kanungo (2006) and Choy *et al.* (2006)

Table III The breakdown structure of "organizational performance" macro benefit

Benefits	*Micro benefits*	*Sources*
Tangible performance	Improved efficiency	Chourides *et al.* (2003), Chen and Chen (2005), Anantatmula and Kanungo (2006), Egbu *et al.* (2005), Choy *et al.* (2006), Goldoni and Oliveira (2010), Jennex *et al.* (2009), Wei *et al.* (2009) and Zack *et al.* (2009)
	Improved effectiveness	Edvardsson and Durst (2013)
	Increased sales	Chong *et al.* (2000) and Edvardsson and Durst (2013)
	Increased share price	Anantatmula and Kanungo (2006) and Choy *et al.* (2006)
Intangible performance	Improvement of strategy quality	Chen and Chen (2005), Egbu *et al.* (2005) and Goldoni and Oliveira (2010)
	Better decision-making	Anantatmula and Kanungo (2006), Choy *et al.* (2006) and Wei *et al.* (2009)
	Shorter problem-solving time	Jones (2003), Anantatmula and Kanungo (2006), Egbu *et al.* (2005), Choy *et al.* (2006), Wei *et al.* (2009) and Goldoni and Oliveira (2010
	Increased innovation	Egbu *et al.* (2005), Anantatmula and Kanungo (2006), Choy *et al.* (2006), Jennex *et al.* (2009), Wei *et al.* (2009), Goldoni and Oliveira (2010) and Edvardsson and Durst (2013)
	Fewer mistakes	Jones (2003)
	Rework reduction	Goldoni and Oliveira (2010)
	Improved business processes	Chen and Chen (2005), Egbu *et al.* (2005), Anantatmula and Kanungo (2006), Choy *et al.* (2006), Zack *et al.* (2009), Goldoni and Oliveira (2010) and Edvardsson and Durst (2013)
	Improved ability to sustain competitive advantage of an organization	Chourides *et al.* (2003), Egbu *et al.* (2005), Jennex *et al.* (2009) and Wei *et al.* (2009)
	Improved project management	Chong *et al.* (2000)
	Development of supplier relationship	Chen and Chen (2005), Goldoni and Oliveira (2010) and Edvardsson and Durst (2013)

4.3 Presenting the synthesis (Step 3)

By completing the steps of the meta-synthesis method, a KM benefits' framework including 44 benefits which were classified under three layers (micro benefits, benefits and macro benefits) was obtained. The framework is shown in Table IV.

5. Discussion

In an effort to identify the KM benefits discussed in the literature between 2000 and 2013 and classify them in the form of a comprehensive framework, we performed an extensive research on the KM performance outcome literature by adapting the qualitative meta-synthesis method. A KM benefits' breakdown structure which encompasses three layers of benefits was identified as shown in Table IV. The following subsections will explain each of the framework layers in detail.

5.1 Human capital

Human capital is defined as the availability of skills, talent and know-how to perform activities required by a firm's strategy. Human capital is the knowledge that each individual

Table IV The three-layer framework of KM benefits

Macro benefits	*Benefits*	*Micro benefits*	
Human capital	Training and learning	Increased empowerment and upskilling of employees	Better on-the-job training of employees
		Improved learning curve	Enhanced individual learning level
		Improved adaptability of employees	Development of innovating and entrepreneurial culture
		Enhanced intellectual capital	Enhanced organizational learning level
		Identification of knowledge flows and knowledge gaps within the firm	Improved integration of knowledge within the firm
		Identifying and sharing best practices	Improved capture and use of knowledge from sources outside the firm
	Communication and participation	Improved communication among employees	Increased employee participation and collaboration
		Improved coordination among employees	Enhanced knowledge sharing among employees
	Motivation and retention	Increased employees motivation and satisfaction	Identification and retention of knowledge capital
		Better staff attraction and retention	
Market and customer relations development	Customer relationship management	Development of customer relationship and Better customer interaction	Improved creation of value and services to customers
		Increased customer satisfaction	Reduction of customer complaints
		Customer retention	
	Market management	Improved new product development	Creation of new business opportunities
		Enhanced product or service quality	Increased market share
		Increased market size	Entry into different market type
Organizational performance	Tangible performance	Improved efficiency	Improved effectiveness
		Increased sales	Increased share price
	Intangible performance	Improvement of strategy quality	Better decision-making
		Shorter problem-solving time	Increased innovation
		Fewer mistakes	Rework reduction
		Improved business processes	Improved ability to sustain competitive advantage of an organization

has and generates (Edvardsson and Oskarsson, 2011). Considering the current condition of a business, continuous training of staff is essential. Investing in human capital is no longer considered an expense for organizations, but rather an investment. To be up-to-date and also to predict special events and circumstances, it is necessary to continuously train and enhance the employees, which can lead to individual and organizational enhancement.

KM in an organizational structure enhances the level of organizational learning through generating a knowledge network among senior, middle and executive managers, as well as employees. This eventually leads to organizational agility which is defined as "the outcome of close cooperation between KM and organizational learning efforts" (Bennet and Bennet, 2004). With an effective knowledge process, communication is improved among employees, and knowledge can be effectively transferred to and among them. This improves employees' learning and enhances their skills which lead to improved innovation and creativity among employees.

On the other hand, KM encourages employees to continuously learn from each other and increases the likelihood of access to useful knowledge and information in the face of sudden events and conditions and also improves their adaptability to new changes (Becerra-Fernandez and Sabherwal, 2010). The enhancement of staff learning and adaptability makes them feel better about themselves, as these advantages increase the value of the staff in the labor market compared to that of the organizations in which KM has not been implemented. Through documentation of the experiences, employees become familiar with solutions to problems that they may encounter in the future and, therefore, they commit fewer mistakes when performing tasks and, overall, their performance will improve.

In addition, through proper utilization of KM, better on-the-job training programs can be developed based on the mission-critical skills needed by an organization and the available knowledge, skills and abilities of the employees. Proper utilization of knowledge also enables employees to identify new products and services in which the organization has the potential to offer to its customers, thus resulting in the development of an entrepreneurial culture for organizational growth and success (Choy *et al.*, 2006).

All these result in better stimulation and motivation among the employees; thus, an organization can better retain its employees. Furthermore, this also serves as an attraction to outside candidates to join the organization. Motivated employees are willing to share their knowledge because they feel more valued for their intellectual capabilities and skills when they can see their contribution toward improvements in the organization. In addition, employees from all levels actively involved in knowledge sharing when their contributions were recognized as team rather than individual achievements (Ibrahim *et al.*, 2009) These all eventually lead to improved communication and coordination among employees. With improved communication, the sharing of best practices is fostered among employees and between managers and employees. Such sharing improves employees' performance by replicating successes throughout an organization.

Through effective knowledge processes, knowledge assets can be identified. Furthermore, knowledge flows can be examined, and, subsequently, knowledge gaps can be identified so that measures can be taken to close the gaps; as a result, the integration of knowledge within the organization can be improved. KM identifies what knowledge is needed to support the overall organizational goals. It also focuses on the efforts knowledge needs to satisfy the present clients and to win new clients. KM provides a map of knowledge flows within and across the organizations. In addition, it highlights both the best practices and barriers to knowledge sharing.

5.2 Market and customer relations development

The intellectual assets of a firm include not only employees' know-how but also business processes and customers' knowledge as well (Bassi and Van Buren, 1999). In fact, one of

the main goals of KM is to manage and enhance relationship with existing and new customers (Roos *et al.*, 1997).

KM identifies the required knowledge to support the overall goals of the organization and focuses on the knowledge efforts which are required to satisfy existing customers and attract new ones. Sharing the knowledge with customers helps them to achieve a better understanding of structure of the organization and also creates an environment for sharing information and innovations with suppliers (Egbu *et al.*, 2005). KM processes, through improving innovation, help the organization to introduce new products or to deliver products with more value than the former ones to the market (Becerra-Fernandez and Sabherwal, 2010).

It has generally been assumed that the customer will be more satisfied through lower prices, better quality products and enhanced customization that KM can bring about (Edvardsson and Oskarsson, 2011). With an effective management of knowledge processes in place, customer interaction with the company enhances. This enables better customer handling, as organizations know the needs and requirements of their customers better. Feedback from customers increases the innovative and creative capacity of the organization; thus, the quality of products and services can be enhanced and productivity in delivering products and services will be improved.

This will allow constant improvement of competitive services and technology based on the knowledge available. As such, new business opportunities can be identified, including new product development and entry into different market types. All these will definitely create more value to customers, leading to customer satisfaction and, as result, to customer retention.

5.3 Organizational performance

Organizational performance refers to the performance outcomes of an organization as a result of its KM initiatives. As discussed earlier, the success of a knowledge-based organization is measured by looking not only at its financial performance but also at the intangible assets owned by the firm. This is because financial performance alone cannot measure IC adequately (Choy *et al.*, 2006). In other words, KM efforts result in soft measures which are not directly tied to the end results. Improving these soft measures leads to gains in efficiency, effectiveness and innovation, which, in turn, have a significant effect on what organizations look for (Stankosky, 2005).

KM could provide critical information and knowledge to "knowledge workers" efficiently and effectively so as to reduce cost and time while improving the quality of performance (Liebowitz, 1999). KM enables an innovation strategy that would otherwise not be possible. Firms with more innovative creation approaches informed by knowledge creation have been found to be more profitable over time (Egbu *et al.*, 2005).

From the intangible performance point of view, KM efforts toward enhancing collaboration lead to improvement in business processes and team performance. In turn, these successes will result in increased innovation, better decision-making and improved team performance. One the other hand, improved communication, which is one of the results of effective KM practices, leads to improved learning, a greater awareness of mission-critical information and the transformation of individual knowledge to organizational knowledge and vice versa. Together, these factors will improve organizational processes and decision-making systems (Stankosky, 2005).

Through an effective KM initiative, organizations benchmark industry's best practices and, thus, improve the development of business strategies. This will allow constant improvements of competitive long-range services and technology strategies based on the knowledge available. In turn, these successes lead to improved ability of organization to sustain competitive advantage over its rivals.

From the tangible and financial point of view, KM efforts will, ultimately, lead to increased profits and reduced costs, increased sales and increased share price. As such, the company's overall performance will be improved.

6. Conclusion

This paper has reviewed the KM benefits suggested by various researchers and academics. After reviewing the prior research in this field, it was found that most studies focused on a specific aspect of KM benefits. The majority of previous studies emphasized on some of organizational performance indicators and also on training improvement and human resource development. However, some of these papers, in addition to the aforementioned benefits, introduced other aspects of KM benefits. Some researchers focused on market management improvement through KM (Anantatmula and Kanungo, 2006; Chen and Chen, 2005; Choy *et al.*, 2006; Jones, 2003), some on improving customer service and others focused on customer retention as the benefits that KM brings to organizations (Edvardsson and Durst, 2013; Goldoni and Oliveira, 2010; Zack *et al.*, 2009). Some researchers (Anantatmula and Kanungo, 2006; Chong *et al.*, 2000; Chourides *et al.*, 2003; Choy *et al.*, 2006; Jennex *et al.*, 2009) have introduced improvement in communication and participation among employees as one of the KM benefits and others referred to improvement in strategy quality through KM and also development of supplier relationship (Chen and Chen, 2005; Egbu *et al.*, 2005; Goldoni and Oliveira, 2010).

Among related previous research, except for Anantatmula and Kanungo (2006) who identified 26 benefits of KM and Choy *et al.* (2006) who identified 38 benefits for KM, most of the existing research referred to a limited number of benefits, and none of them presented a comprehensive list of KM benefits. In this paper, by extracting, consolidating and integrating the KM benefits using meta-synthesis method and during three coding stages, the authors proposed a framework which contains 44 benefits of KM. One of the distinguishing aspects of the current study from other studies in this field is proposing a more comprehensive framework compared to the previous studies. Another distinctive aspect of this paper is proposing a three-layer framework of KM benefits, whereas, in the previous studies, the KM benefits were presented in maximum two layers. Also, to the best of the authors' knowledge, no meta-synthesis research has previously been conducted regarding KM benefits. The findings of this research help to create a better understanding on KM initiatives' benefits. The limitation associated with this study is the lack of criteria and measures to assess the benefits of KM. This issue has been ignored in prior research, and, thus, as the purpose of this paper was to integrate the findings of previous research, introducing applicable measures to assess KM benefits was not achievable. It is hoped that additional research will be undertaken to build upon this work and develop criteria and indicators for evaluation of the benefits introduced in this paper's framework. Another suggestion for the future study is the design of a system for assessing KM benefits based on the proposed breakdown structure. The authors also believe that relationship networks among all the KM benefits can be explored to establish an association among them. Examining the effect of KM infrastructure in KM benefits realization is also suggested to broaden the horizon on this subject.

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