An Integrated Knowledge Management Capabilities Framework for Assessing Organizational Performance

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Abstract - In the present aggressive world of competition, knowledge management strategies are becoming the major vehicle for the organizations to achieve their goals; to compete and to perform well. Linking knowledge management to business performance could make a strong business case in convincing senior management of any organization about the need to adopt a knowledge management strategy. Organizational performance is, therefore, a key issue and performance measurement models provide a basis for developing a structured approach to knowledge management. In this respect, organizations need to assess their knowledge management capabilities and find ways to improve their performance. This paper takes these issues into account when study the role of knowledge management in enhancing the organizational performance and consequently, developed an integrated knowledge management capabilities framework for assessing organizational performance. The results show that there is positive correlation between knowledge management capabilities and organizational performance. The results also show that the proposed framework can be used to assess organizational performance and also can be used as decision tool to decide which knowledge management capability should be improved.

Index Terms - Knowledge Management Framework; Organizational Performance; Knowledge Management Capabilities

1. Introduction

Because of the increasing interests on knowledge management (KM), various researches had been accomplished. Most researches had dealt with the relationship of knowledge management infrastructure, processes or performance in isolation [1]; some researchers had focused on the relationship between knowledge management infrastructure and knowledge management processes, and others had concentrated on the relationship between knowledge management capabilities and organizational performance [2]. Several studies had proposed 'KM performance' models to describe the performance improve between the enterprise's current capability and the capabilities improve by KM. Gold, et al. indicated how effectively KM resources are being used to leverage organizational capability [3]. Fan, et al. divided Knowledge process capability into acquisition, conversion, application, and protection [4]. Aujirapongpan, et al. synthesized and proposed the indicators of knowledge management capability (KMC) in different knowledge management (KM) processes to assess KM effectiveness [5]. Whereas, Chang & Chuang [6] studied the effective KM processes from the roles of infrastructure capability and business strategy.

Accordingly, an integrated view of knowledge management is missing and how to perform knowledge management to improve organizational performance is not clear. In order to alleviate these limitations of the previous research, this study analyzes the previous studies and proposes an integrated knowledge management capabilities framework for assessing organizational performance. This framework was tested empirically to investigate the correlation between knowledge management infrastructure; knowledge management processes and organizational performance and examine its validity in assessing organizational performance based on knowledge management applications.

The remainder of this paper is organized as follows. Section 2 presents KM components, whereas, section 3 presents KM performance models. Section 4 describes the proposed KM framework. In Section 5, we apply this framework and in section 6 we discuss the results. Finally, we conclude with summaries of this work.

2. Knowledge Management

Definitions of knowledge management (KM) abound in the management literatures. Knowledge management involves the panoply of procedures and techniques used to get the most from an organization's tacit and codified know-how [7]. Filemon & Uriarte [8] defined KM as the strategy and processes to enable the creation and flow of relevant knowledge throughout the business to create organizational, customer and consumer value. Finally, it can be defined as the strategies and processes designed to identify, capture, structure, value, leverage, and share an organization's intellectual assets to enhance its performance and competitiveness.

2.1 Knowledge Management Components

Knowledge management (KM) has captured the attention of organizations as one of the most promising ways for organizations to succeed in the information age.

2.2.1 Knowledge Management Infrastructure Capabilities

The knowledge management infrastructures are the mechanism for the organization to develop its knowledge and also to stimulate the creation of knowledge within the organization as well as the sharing and protection of it. Yeh et al. [8] defined it as necessary building blocks in the improvement of the effectiveness of activities for knowledge management in an organization.

2.2.1.1 Knowledge-based structure

Knowledge-based structure refers to the extent of an organization's structural disposition toward encouraging knowledge-related activities. The structure must be appropriate to the organization in order to adapt to an ever-changing environment [1],[2],[4],[6],[9-16].

2.2.1.2 Knowledge-based technology

Knowledge-based technology is defined as the technical systems within an organization, which determine how knowledge travels throughout the enterprise and how knowledge is accessed. The implementation of knowledge management technologies without ensuring that the organizations employees are well informed about the organization's overall goals and objectives, and how this technology can facilitate the success of these goals, will lead to disappointing returns on the technology investment [1],[2-6,[8-9],[12-16].

2.2.1.3 Knowledge-based human resources

Knowledge-based human resource describes the extent to which employees specialize in a particular domain and demonstrate the capability of applying that knowledge to interact with others. Since, people are the exclusive creators of knowledge, managing knowledge is managing people, and managing people is managing knowledge [3],[6],[10-12],[4],[16].

2.2.1.4 Knowledge-based culture

Culture incorporates a set of shared values, norms and beliefs, mainly implicit, that the members of an organization possess. Culture defines not only what knowledge is valued, but also what knowledge must be kept inside the organization for sustained innovative advantage [1],[3-6],[9-15],[16].

2.2.2 Knowledge Management Process Capabilities

The knowledge management processes is defined as the managerial processes which develop, transfer, transmit, store and apply knowledge, as well as providing the members of the organization with real information to react and make the right decisions, in order to attain the organization's goals.

2.2.2.1 Knowledge Acquisitions

Knowledge acquisition is a process that covers the activities of the accessibility, collecting and application of acquired knowledge. It also refers to how knowledge is acquired from various external and internal sources [3-5],[13],[15],[18-21].

2.2.2.2 Knowledge Conversions

Knowledge acquired from either external or internal sources is ineffective unless it is converted into useful and applicable forms to improve productivity and business operations. Therefore, Conversion is an important factor in process capability [4],[15],[18-19],[22-23].

2.2.2.3 Knowledge Applications

Knowledge application is a focal element in knowledge management process. The value of individual and organizational knowledge resides primarily on its application. The application of knowledge enables organizations continuously to translate their organizational expertise into embodied products [1],[4-5],[12-13],[15],[18-19],[23-25].

2.2.2.4 Knowledge Protections

Security is always the major concern in any organization's management information systems. Protecting corporate knowledge requires clear but detailed policies to ensure the knowledge asset is in its safe state at all times. The enterprises need to assure their organizational knowledge is kept safely and accessed only by authorized personnel. Protection of knowledge asset is an essential task in the organization's KM implementation [3-4],[13],[15],[18],[26].

2.2.2.5 Knowledge Storing

Knowledge can be stored within the organization 'organization memory' and include physical resources (like written documentation, structured information stored in electronic databases, codified human knowledge stored in expert systems, documented organizational procedures and processes) as well as non-physical resources or can be found outside of the organization [1],[5-6],[9],[17].

2.2.3 Knowledge Management Functions

Argote, et al. [27] defined knowledge management functions as the degree to which the organization creates; shares and utilize knowledge resources across functional boundaries.

2.2.3.1 Knowledge Creation

This comprises activities associated with the entry of new knowledge into the system, and includes knowledge development, discovery and capture. Nonaka, et al. [28] defined Knowledge creation as the process of making available and amplifying knowledge created by individuals as well as crystallizing and connecting with an organizations' knowledge system.

The creation of knowledge across functional boundaries requires the capability to generate new applications from existing knowledge and to exploit the unexplored potential of new skills [5],[10],[12],[28-29].

2.2.3.2 Knowledge Sharing

The ability of sharing and distributing knowledge resources across functional boundaries enables the organization to fundamentally change its business processes. The sharing of knowledge resources not only facilitates cross-functional interaction but also allows the sharing of knowledge repositories among process participants, thereby allowing greater collaboration and understanding of the entire process rather than having fragmented parts of the process [1],[6],[9],[12].

2.2.3.3 Knowledge Utilizations

This includes the activities and events connected with the application of knowledge to business processes. Knowledge utilization refers to the degree to which the organization applies the knowledge resources that are shared across functional boundaries. It allows the organization to reap returns on its knowledge resource [1],[5],[27].

3. Knowledge Management Performance Models

Performance measurement is one of most important management activities "what you measure is what you get". Performance measurement becomes the basis of strategy establishment and achievement in the future because it can definitely bring a company's vision and strategic target to all organization members as well as CEOs, and performs a role that makes efficient internal business processes possible. There are many researches reveal that corporate performance is significantly influenced by the KM activities [2],[5-6],[9-12],[16],[20],[30-34].

The evaluation of knowledge management (KM) performance has become increasingly important since it provides the reference for directing the organizations to enhance their performance and competitiveness. Many scholars had attempted to measure the contribution of the KM by different models like Lee & Choi [18]; Chang & Chuang [9]; Fan, et al. [4]; Gold, et al. [3]; Lee & Lee [2]; Liao & Chuang [11] and Zaim, et al. [1].

Recently, Smith, et al. [15] examined the relationship between knowledge management capabilities and organizational effectiveness utilizing a model developed by Gold, et al. [3]. They also attempted to link the knowledge management

capabilities to the business strategy postulating a further improvement organizational effectiveness. Theriou, et al. [16] identified and discussed the critical success factors or enablers that determine the KM effectiveness within organizations, which in turn influence the total performance of the firm. Enabler factors include leadership, culture, technology, KM strategy, and people. Firm performance includes market share, and profitability.

In 2011, Mills & Smith [13] evaluated the impact of specific knowledge management resources (i.e. knowledge management enablers and processes) on organizational performance. Knowledge management capabilities divided into knowledge infrastructure capability and knowledge process capability. Also, Bhatti, et al. [35] presented a conceptual framework model of process, intellectual capital, culture and strategy (PICS) for successful implementation of knowledge management. They concluded that the effective utilization of knowledge will not only create competitive advantage but also improve organizational performance.

4. Proposed Knowledge Management Performance Framework

Over the past several years, a number of authors had proposed a variety of approaches for classifying the tools that typically comprise knowledge management systems. This is not the first attempt to develop a framework for organizing and understanding knowledge management tools. This paper provides a framework for characterizing the knowledge management capabilities and assessing organizational performance capabilities. In accordance with the models proposed by Aujirapongpan, et al. [5]; Chang & Chuang [6]; Fan, et al. [4] and Gold, et al. [3], an integrated knowledge management capabilities framework for assessing organizational performance was developed. The framework assumes that organizational performance affected by organization knowledge management applications (infrastructure capabilities; process capabilities and functions). Five dimensions were selected to measure knowledge management process capabilities; these dimensions are acquisition, conversion, application, protections and storing.

Also, four dimensions were selected to measure knowledge management infrastructure capabilities these dimensions are technology, structure, culture and human resources. Seven indicators were proposed to measure organizational performance improvement opportunities through three main functions (creation, sharing and utilization) as shown in figure1.
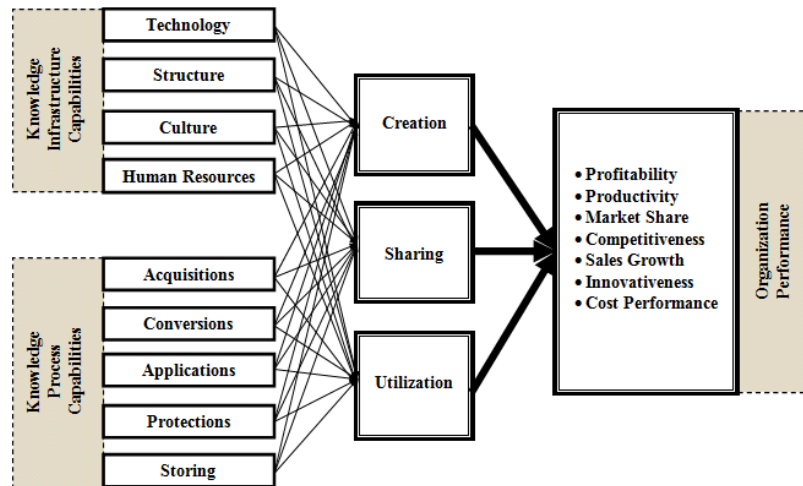
Fig 1: Proposed Knowledge Management Performance Models

The proposed framework can be expressed as follows:

$(OP) \equiv (KMI + KMP) * KMF$

$(OP) = m\ ((KMI + KMP) * KMF))$

$$KMI = \sum_{i=1}^{4} (X_i * I_i)/4 \quad \ldots\ldots\ldots\ldots(1)$$

$$KMP = \sum_{j=1}^{5} (Y_j * I_j)/5 \quad \ldots\ldots\ldots\ldots (2)$$

$$KMF = \sum_{k=1}^{3} (Z_k * I_k)/3 \quad \ldots\ldots\ldots\ldots(3)$$

From equations 1; 2 & 3, the general equation is as follows:

$$OP = m\left[\sum_{i=1}^{4}(X_i * I_i)/4 + \sum_{j=1}^{5}(Y_j * I_j)/5 + \sum_{k=1}^{3}(Z_k * I_k)/3 \right] \ldots\ldots (4)$$

Where:
OP = Organizational Performance
KMI = Knowledge Management Infrastructure
KMP = Knowledge Management Process
KMF = Knowledge Management Functions
X_i = mean of knowledge management infrastructure dimensions
Y_j = mean of knowledge management process dimensions
Z_k = mean of knowledge management functions dimensions
I_i, I_j, I_k = degree of importance of KM infrastructure; process & functions dimensions
m = Correction factor depends on organization type (should be calculated in the first time when using this framework)

5. Research Methodology

The main objective of this work is to investigate the correlation between knowledge management capabilities (infrastructure; processes and functions) organizational performance and propose an integrated knowledge management capabilities framework for assessing organizational performance. To fulfill the objective and achieve the goal, a questionnaire was designed to collect the required information.

5.1 Questionnaire Design

The questionnaire was designed based on Gold, et al. [3]; Lee & Choi [10]; Lee & Lee [2] and Smith, et al. [15] models. Several professors and IS professionals were interviewed to modify the statements, the final questionnaire consists of nineteen dimensions with eighty six statements (24 to measure KM infrastructure, 30 to measure KM process, 18 to measure KM functions and 14 to measure organizational performance) as shown in Appendix (I).

The participants were asked to rate their perception towards the knowledge management level within their organizations on a five-point Likert-type scale with anchors from "5- Strongly agree" to "1- Strongly disagree" and the relative importance for each KM applications dimensions.

5.2 Research Sample and Questionnaire Distribution

Organizations under study were large size organizations. Two conditions were applied to select these organizations: their experiences in knowledge management applications and their acceptance to participate. Forty five organizations belonging to three sectors (industrial; services and information technology) were selected based on a recommendation from Cairo Chamber of Commerce (CCC), Egypt. After personal contact, twenty seven organizations were agreed to participate in the study conditioning to hide their names. To assure the participants quick and correct response, the questionnaire copies submitted to supervisor persons. They have been asked to answer not more than 25 copies of the questionnaire. Some managers were very corporative and followed distribution of the questionnaire by themselves, but others didn't care about distributing the questionnaire. The total numbers of sent questionnaires were 675 copies and the received questionnaires were 485 copies with response rate 71.85 %. The majority of the participants are from organizations in the private sector (60.84 % working in private organizations and 39.16 % are working in public organizations). Also, most of them are working in Services sector (37.53 %) followed by IT sector 34.02% and Industrial sector 28.45%) as shown in Table 1.

Table 1 : Results of knowledge infrastructure capabilities

Sector	Organization Type				Total	
	Private		Public			
	No. of organizations	No. of respondents	No. of organizations	No. of respondents	No. of organizations	No. of respondents
Services	3	55	7	127	10	182
Industry	5	87	3	51	8	138
IT	8	153	1	12	9	165
Total	**16**	**295**	**11**	**190**	**27**	**485**

Twenty five questionnaires were randomly selected from the received questionnaires in each sector to use as control sample.

6. Results and Discussion
6.1 Results

The obtained results showing that the dimensions of knowledge management applications have different mean values according sector types as shown in Table 2. Pearson correlation was used to examine is there any correlation between knowledge management dimensions that include infrastructure; process and functions and organizational performance? The results show that the correlation coefficients are more than 0.7; it means that knowledge management dimensions have high significant correlation (strong positive correlation) with organizational performance.

The analysis results show that there is a strong positive correlation between knowledge management dimensions (infrastructure and process) and knowledge management functions. The results also show that there is a strong positive correlation between knowledge management functions and organizational performance as shown in Tables 3&4.

Table 2 : Results of knowledge management applications

	Item	Service			Industry			IT		
		Mean	I_i	KMI	Mean	I_i	KMI	Mean	I_i	KMI
Knowledge Infrastructure Capabilities	Technology	3.62	0.19		3.71	0.35		4.32	0.44	
	Culture	3.51	0.18	3.58	3.77	0.13	3.89	4.36	0.11	4.31
	Structure	3.44	0.21		3.39	0.27		4.21	0.19	
	Human resource	3.66	0.42		3.71	0.25		4.33	0.26	
	Item	Mean	I_j	KMI	Mean	I_j	KMI	Mean	I_j	KMI
Knowledge Process Capabilities	Acquisitions	3.54	0.18		3.58	0.15		4.19	0.18	
	Conversions	3.49	0.16		3.67	0.19		4.27	0.17	
	Application	3.54	0.16	3.52	3.85	0.25	3.73	4.37	0.19	4.32
	Protection	3.43	0.25		3.71	0.26		4.24	0.28	
	Storing	3.61	0.25		3.76	0.15		4.31	0.18	
	Item	Mean	I_k	KMI	Mean	I_k	KMI	Mean	I_k	KMI
Knowledge Functions	Creation	3.52	0.20		3.63	0.30		4.15	0.30	
	Sharing	3.42	0.40	3.48	3.58	0.35	3.64	4.09	0.30	4.18
	Utilization	3.52	0.40		3.70	0.35		4.28	0.40	
Organizational Performance		3.83			4.02			4.46		

Table 3 : Correlation between KM Dimensions and KM Functions

Item	Correlation Coefficient KM Dimensions
KM Functions	0.999401
Creation	0.999541
Sharing	0.999991
Utilization	0.990822

Table 4 : Correlation between KM Dimensions and KM Functions

Item	Correlation Coefficient	
	KM Functions	KM Functions
Organizational Performance	0.996972	0.999401
Profitability	0.998878	0.999991
Productivity	0.999917	0.999541
Market Share	0.995736	0.990822
Competitiveness	0.982617	0.989719
Sales Growth	0.992939	0.997136
Innovativeness	0.984878	0.991443
Cost performance	0.998511	0.999935

6.1 Framework Deployment

Organizational performance can be calculated using the proposed framework after calculating the correction factors as follows:

$OP_{Services}$ = m [(3.58)/4 + (3.52)/5] * 3.48/3
3.83   = m (1.855)
$m_{Services}$ = 2.06

$$OP(Services) = 2.06\left[\sum_{i=1}^{4}(X_i * I_i)/4 + \sum_{j=1}^{5}(Y_j * I_j)/5\right] * \sum_{k=1}^{3}(Z_k * I_k)/3$$

$OP_{Industry}$ = m [(3.89)/4 + (3.73)/5] * 3.64/3
4.02   = m (2.09)
$m_{Industry}$ = 1.92

$$OP(Industry) = 1.92\left[\sum_{i=1}^{4}(X_i * I_i)/4 + \sum_{j=1}^{5}(Y_j * I_j)/5\right] * \sum_{k=1}^{3}(Z_k * I_k)/3$$

OP_{IT} = m [(4.31)/4 + (4.32)/5] * 4.18/3
4.46   = m (2.71)
m_{IT} = 1.65

$$OP(IT) = 1.65\left[\sum_{i=1}^{4}(X_i * I_i)/4 + \sum_{j=1}^{5}(Y_j * I_j)/5\right] * \sum_{k=1}^{3}(Z_k * I_k)/3$$

The framework is ready to use to assess (expect) the organizational performance based on knowledge management applications in each field. The results of the control sample are shown in Table 4.

The calculated and measured organizational performances for the three sectors are shown in Table 5.

The results show that the differences between calculated and measured organizational performances ranged between 0.4 % and 1.8 %. It means that the framework can be used to expect the organizational performances based on knowledge management applications.

Table 4 : Results of control sample

	Item	Service			Industry			IT		
		Mean	I_i	KMI	Mean	I_i	KMI	Mean	I_i	KMI
Knowledge Infrastructure Capabilities	Technology	3.40	0.19		3.93	0.35		4.34	0.44	
	Culture	3.59	0.18	3.51	3.68	0.13	3.72	4.38	0.11	4.33
	Structure	3.33	0.21		3.45	0.27		4.22	0.19	
	Human resource	3.61	0.42		3.72	0.25		4.36	0.26	
	Item	Mean	I_j	KMI	Mean	I_j	KMI	Mean	I_j	KMI
Knowledge Process Capabilities	Acquisitions	3.53	0.18		3.77	0.15		4.18	0.18	
	Conversions	3.56	0.16		3.72	0.19		4.30	0.17	
	Application	3.74	0.16	3.63	3.71	0.25	3.74	4.38	0.19	4.29
	Protection	3.64	0.25		3.74	0.26		4.25	0.28	
	Storing	3.68	0.25		3.76	0.15		4.33	0.18	
	Item	Mean	I_k	KMI	Mean	I_k	KMI	Mean	I_k	KMI
Knowledge Functions	Creation	3.49	0.20		3.70	0.30		4.17	0.30	
	Sharing	3.45	0.40	3.53	3.53	0.35	3.60	4.11	0.30	4.20
	Utilization	3.62	0.40		3.57	0.35		4.29	0.40	
Organizational Performance		3.79			3.92			4.46		

Table 5 : Organizational performances

Sector	Organizational Performance			
	Calculated	Measured	Difference	%
Services	3.88	3.81	0.07	1.80%
Industry	3.87	3.92	0.05	1.30%
IT	4.44	4.46	0.02	0.40%

7. Conclusion

A critical issue in adoption of knowledge management initiatives is the preliminary preparation of the organization to accept, adopt, and utilize new knowledge management processes. Many organizations still view knowledge management as launching some software programs without adequate consideration of their organizational characteristics to ensure the success of their knowledge management initiatives. Wei, et al suggested further research to investigate the relationship between degrees of knowledge management implementation within an organization and corresponding increases in organizational performance. Therefore, the purpose of this work is to provide a conceptual framework to describe the KM dimensions and address its relationship with organizational performance [36]. The results show that there is positive correlation between knowledge management capabilities and organizational performance. These results indicate that the KM dimensions are well implemented in IT sector followed by Industrial and Services sectors. The highest dimension in Services sector that affects organizational performance is human resources and has mean value of 3.66; whereas, culture is the highest dimension in Industrial and IT sectors and has mean

values of 3.77; and 4.36 respectively. In knowledge management process, the highest dimension in Services sector that affects organizational performance is storing and has mean value of 3.61; whereas, applications is the highest dimensions in Industrial and IT sectors and has mean values of 3.85; and 4.37 respectively. The results also show that the proposed framework can be used to assess organizational performance and also can be used as decision tool to decide which knowledge management capability should be improved.

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Appendix (I): Questionnaire Statements

Statements of knowledge infrastructure capabilities				
Relative Importance	**technology**	**structure**	**culture**	**human resources**	**Total 100%**
1. Our organization provides IT support for collaborative works regardless of time and place				
2. Our organization provides IT support for communication among organization members.				
3. We have easy computer access to the information we need to do our jobs.				
4. Our organization provides IT support (e.g., groupware) for information acquisition.				
5. Our organization provides IT support (e.g., intranet) for information sharing.				
6. Our organization provides IT support for systematic storing.				
7. Our organization provides various formal training programs for performance of duties.				
8. Our organization provides job rotation for employees to develop themselves				
9. There is a willingness to collaborate across organizational units within our organization.				
10. Our organization members are helpful.				
11. Our organization members are generally trustworthy				
12. Our organization members have reciprocal faith in others' behaviors to work toward organizational goals.				
13. Our organization members are encouraged to make their own decisions.				
14. Our organization members can make decisions without approval.				
15. Our organization members do not need to ask their supervisor before action.				
16. In our organization there are many activities that are not covered by some formal procedures.				
17. In our organization members make their own rules on the job.				
18. In our organization rules and procedures are typically written.				
19. Our organization members can understand not only their own tasks but also others' tasks.				
20. Our organization members are specialists in their own part.				
21. Our organization members can perform their own task effectively without regard to environmental changes.				
22. Our organization members think that their own tasks are the region employing knowledge.				
23. Our organization members can communicate well not only with their department members but also with other department members.				
24. Our organization members are supportive for knowledge sharing & creation.				

Statements of knowledge process capabilities					
Relative Importance	**acquisition**	**conversion**	**application**	**protections**	**storing**	**Total 100%**
1. Our organization has processes for acquiring knowledge about our customers.					
2. Our organization has processes for generating new knowledge from existing knowledge.					
3. Our organization has processes for acquiring knowledge about our suppliers.					
4. Our organization uses feedback from projects to improve subsequent projects.					
5. Our organization has processes for acquiring knowledge about competitors within our industry.					
6. Our organization has processes for exchanging knowledge between individuals.					
7. Our organization has processes for converting knowledge into the design of new products/services.					
8. Our organization has processes for filtering knowledge.					
9. Our organization has processes for transferring organizational knowledge to individuals.					
10. Our organization has processes for absorbing knowledge from individuals into the organization					
11. Our organization has processes for organizing knowledge.					
12. Our organization has processes for replacing outdated knowledge.					
13. Our organization has processes for applying knowledge learned from mistakes.					
14. Our organization has processes for applying knowledge Learned from experiences.					
15. Our organization has processes for using knowledge to solve new problems.					
16. Our organization uses knowledge to improve efficiency.					
17. Our organization quickly applies knowledge to critical competitive needs.					
18. Our organization Makes knowledge accessible to those who need it.					
19. Our organization has processes to protect knowledge from inappropriate use inside the organization.					
20. Our organization has processes to protect knowledge from inappropriate use outside the organization.					
21. Our organization has incentives that encourage the protection of knowledge.					
22. Our organization has technology that restricts access to some sources of knowledge.					
23. Our organization has extensive policies and procedures for protecting trade secrets.					
24. Our organization Knowledge that is restricted is clearly identified.					
25. Our organization stresses representing knowledge in documents, databases, and software.					
26. I always find the precise knowledge I need.					
27. I always find the sufficient knowledge to enable me to do my tasks.					
28. The specific knowledge that I need resides with the experts rather than being stored in the portal.					
29. The knowledge stored in the portal cannot be directly applied without extensive modifications.					
30. The stored knowledge in your organization is quite important, relevant and latest.					
Statements of knowledge functions					

Relative Importance	creation	sharing	utilization	Total 100%
1. Our organization creates new knowledge for application across functional boundaries.				
2. Our organization creates operation systems for application across functional boundaries.				
3. Our organization creates managerial policies and processes for application across functional boundaries				
4. Our organization always provides the necessary sources (internet, publications, collages, etc) for me to create the knowledge I need to fulfill my job effectively				
5. Our organization provides opportunities on a regular basis to attend training internally to enhance knowledge creation				
6. Our organization stresses generating new knowledge.				
7. Our organization engages in the process of distributing knowledge among departments.				
8. Our organization has a standardized reward system for sharing knowledge.				
9. Our organization designs activities to facilitate knowledge sharing across functional boundaries.				
10. Our organization engages in processes of integrating different sources of knowledge across functional boundaries.				
11. Our organization engages in processes of transferring knowledge to employees across functional boundaries.				
12. We make good use of technologies (e.g. tele/ video-conferencing, groupware) to share information on products and processes within the organization.				
13. Our organization engages in processes which apply experiential knowledge across functional boundaries.				
14. Our organization engages in processes which apply knowledge to solve new problems across functional boundaries.				
15. Our organization stresses using accessible knowledge in decision making.				
16. Our organization has processes for using knowledge in development of new products/services.				
17. Our organization uses knowledge to adjust strategic direction.				
18. Our organization is able to locate and apply knowledge to changing competitive conditions.				
Statements of organizational performance				
1. Our organization has more Productivity than its key competitors				
2. Using KM increases my productivity.				
3. Our organization is more profitable than its key competitors				
4. KM improves Profitability				
5. Our organization has a greater market share than its key competitors				
6. KM improves Market Share				
7. Our organization has a greater sales growth than its key competitors				
8. KM improves Sales Growth				
9. Our organization is more innovative than its key competitors				
10. Over the past two years, my organization has improved its ability to Innovate new products/services.				
11. We frequently look for ways to improve cost effectiveness of our selling and promotional activities.				
12. KM improves Cost performance				
13. If a major competitor launches an intensive campaign targeted at our customers, we would implement a response immediately.				
14. We often change the range of products or services that we offer.				