Knowledge Management Capability in Nepalese Commercial Banks

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Abstract

This study focuses on exploring the state of knowledge management capability (KMC) in Nepalese commercial banks and develop as well as validate its dimensions. A survey research strategy was adopted to achieve the study objective and the descriptive research design was followed to explore the state of KMC in Nepalese commercial banks. The population of this study was comprised of all 27 commercial banks of Nepal. To achieve sufficient sample size and generalization of the result, the sample frame for this study included 9 commercial banks. At least 20 employees from each organization were approached to respond about the existence of KMC in their respective organizations. Altogether 250 questionnaires were distributed, out of this 180 questionnaires were returned, the response rate was 72%, which may be taken highly satisfactory in survey research design. The exploratory factor analysis (EFA) of KMC was done to extract the latent factors or dimensions from the measured items. All three dimensions of KMC were found in unsatisfactory state. The private sector banks were found to have a better position in all three dimensions of KMC than the public sector banks. Further, the EFA of KMC items revealed for dimensions of KMC: knowledge acquisition, knowledge sharing-employees, knowledge sharing-management and knowledge utilization.

Key Words: knowledge acquisition, knowledge sharing-employees, knowledge sharing-management and knowledge utilization.

Introduction

Background

Knowledge workers have become the most vital asset in the knowledge-based society (Drucker,1993). Knowledge management (KM) is aimed at getting people to innovate, collaborate, and make correct decisions efficiently; in short, it is aimed at getting people to act by focusing on high-quality knowledge (June, 2005). Jantunen (2005) states that knowledge is posited in an organization as a strategic asset which can help the firm maintain its competitive ability in a turbulent environment. Knowledge is considered the most important resource in organizations (Choe, 2004), and the characteristics and problems of knowledge do not differ because of different geographic locations (Singh et al., 2008). Hence, a knowledgeable administrative manager should know how to effectively distribute or allocate knowledge

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to maximize utility. A successful corporate KM comes from the support of high-level management and the fundamental investment in HRM.

With relatively small market size, the banking sector is facing competition for innovative financial-services. They may not be able to withstand competition with the traditional sources such as capital and technology. They must improve and innovate continuously to grow and sustain by leveraging their human resource through a continuous learning and build knowledge assets for a sustainability and success.

In conjunction with the above issues, this study focuses to Nepalese banking industry. By now, this industry has turned to be very competitive primarily due to liberalization of Nepalese economy. Under such situation, knowledge development and management for innovation becomes a key factor for the banking industry to withstand competition and achieve sustainability.

Statement of the Problem and Research Questions

Knowledge management (KM) is based on the premise that, just as human beings are unable to draw on the full potential of their brains, organizations are generally not able to fully utilize the knowledge that they possess. Through KM, organizations seek to acquire or create potentially useful knowledge and to make it available to those who can use it at a time and place that is appropriate for them to achieve maximum effective usage in order to positively influence organizational performance (King, 2008). It is generally believed that if an organization can increase its effective knowledge utilization by only a small percentage, great benefits will result.

Nepalese organizations are operating in a complex and dynamic environment. They have started realizing that they cannot withstand the complexity through the traditional resources such as capital and technology as a result of which they now should focus on learning and knowledge for competitive advantage and sustainability. In relation to the above issues, this study attempts to address the following questions.

1. What is the state of KMC in the Nepalese commercial banks?
2. What is the valid KMC model of Nepalese commercial banks?

Research Objectives

This study primarily focuses on exploring the state of KMC in Nepalese commercial banks and develop as well as validate the dimensions of KMC. Hence, this study attempts to achieve the following objectives.

1. To explore the state of KMC as perceived by the employees in the Nepalese commercial banks.
2. To develop and validate the KMC model of Nepalese commercial banks?

Significance of the Study

This study attempts to explore the KMC of Nepalese commercial banks. It further attempts to develop and validate the dimension of KMC. This study is worthy in the pretext that KM in Nepalese organizations is a new and understudied area. Nepalese organizations still do not take knowledge as a source of competitive advantage. This study is expected to provide an insight of the dimensions through which KMC can be enhanced.

Literature Review

Knowledge Management Capability

In recent years, the term knowledge management has been debated, defined, and redefined repeatedly. It is defined as the tools, techniques, and strategies to retain, analyze, organize, improve, and share business expertise.

Managerial capability can refer to a firm's skills, knowledge, and experiences, which are used to handle difficult and complex tasks in management and production (Choi and Shepherd, 2004). Knowledge is considered the most important resource in organizations (Choe, 2004), and the characteristics and problems of knowledge do not differ because of different geographic locations (Singh et al., 2008). Knowledge is posited in an organization as a strategic asset which can help a firm maintain its competitiveness in a turbulent environment (Jantunen, 2005). Knowledge-based assets and OL capabilities are critical for a firm's innovation activities (Jantunen, 2005).

KM is a business process wherein firms create and use their institutional or collective knowledge (Sarvary, 1999). KM includes three sub-processes: OL, knowledge production, and knowledge distribution - the process that allows members of the organization to access and use the collective knowledge of the firm. There are four steps to integrate KM into the organization's quality strategy: capturing or creating knowledge (plan), sharing knowledge (do), measuring the effects (check) and learning and improving (act) (Lim et al., 1999). KM is aimed at getting people to innovate, to collaborate, and to make correct decisions efficiently; in short, it is aimed at getting people to act by focusing on high-quality knowledge (Du Plessis, 2005). Knowledge management capacity has been recognized as a key factor for gaining and sustaining a competitive advantage (Corsoa et al., 2006; Rezgui, 2007).

Nepalese studies related to knowledge management are rare. Chalise (2011) studied the knowledge management practices of Nepalese public and private sector banks. The main objective of this study was to examine the contribution of knowledge management to banking performance. He concluded that if the commercial banks of Nepal plan to implement knowledge management, they should grabble with business strategy, technology, organizational culture and human resources in order to have an effective knowledge management that could sustain their competitive advantage. He found a positive relationship between the factors of knowledge management practice of Nepalese commercial banks.

Shrestha (2008) concluded that there is still need of improve to knowledge acquisition or implementation or implementation activities in Nepalese banking industry.

Knowledge Management Capability Measures

Existing literature presents various measurements of KMC in organizations. For example, Marquardt (1996) identifies KMC consisting four components: knowledge acquisition, knowledge creation, knowledge storage, as well as knowledge transfer and application. Hsu et al. (2007) identify four factors which affect the adoption of KM: information technology, complexity of management and marketing, formal documentation status as well as knowledge acquisition mechanisms. Similarly, Zack (1999) demonstrates four elements of KMC, namely knowledge acquisition, refinement, storage and retrieval, as well as presentation. Gold et al. (2001) conclude that organizations' should possess two basic abilities to manage knowledge, namely knowledge infrastructure capability and knowledge process capability. Furthermore, Tiwana (2002) proposes that organizational KMCs include finding, creating new, packaging, assembling, reusing and revalidating knowledge. Alavi and Leidner (2001) point out the abilities to create, store, retrieve, transfer and apply knowledge are considered the core of implementing KM in organizations. Moreover, Gottschalk (2006) identifies five indicators of KMC, including knowledge sharing, knowledge distributing, knowledge creating, knowledge capturing and understanding knowledge. Cepeda and Vera (2007) suggest four categories of KMC, namely knowledge creation, knowledge transfer, knowledge retention, and knowledge utilization. Thus, according to the above research, KMC can be classified into three factors, including learning and obtaining, sharing knowledge, and creating and improving knowledge.

From a cross-unit perspective, Tanriverdi (2005) proposes a multi-business firm concept, which divides KMC into two categories: KM within and KM across business units. However, every KMC must go through a four-step process, including creation of related knowledge, transfer of related knowledge, integration of related knowledge and leverage of related knowledge.

In considerations to the above literatures, KMC was measured through three dimensions.

Table: 1

Measures of Knowledge Management Capability

Construct	Description of measurement	References
1. Knowledge acquisition	Four items were used to measure knowledge acquisition by the organization	Leary (1998); Chang Lee et al. (2005); Shih and Chiang (2005)
2. Knowledge sharing	Six items were used to measure the extent to which diffusion of knowledge is promoted	Sviokla (1996); Ruggles (1998); Chang Lee et al.(2005); Shih and Chiang (2005)

3. Knowledge utilization	Five items were used to measure the degree to which employees retrieve information, process and apply it	Wiseman (1988); Weber et al. (1990); Blanning and David (1995); Chang Lee et al. (2005)

Methodology

A survey research strategy was adopted to achieve the study objective and the descriptive research design was followed to explore the state of KMC in Nepalese commercial banks.

The population of this study was comprised of all 27 commercial banks of Nepal. To achieve sufficient sample size and generalization of the result, the sample frame for this study included 9 commercial banks. The informants of this study were the middle and top-level employees of the sample banks from both branch and corporate (head) office who were expected to have better knowledge and understandings of the existence of KMC in their respective organizations better than other employees.

At least 20 employees from each organization were approached to respond about the existence of OLC in their respective organizations. Altogether 250 questionnaires were distributed, out of this 180 questionnaires were returned, the response rate was 72%, which may be taken highly satisfactory in survey research design. EFA of KMC was done to extract the latent factors or dimensions from the measured items.

Analysis and Presentation

The data analysis section of this study has been divided into two parts. The first part includes the descriptive analysis of KMC. The second part of this section of data analysis includes the development of dimensions of KMC by applying exploratory factor analysis.

Descriptive Analysis of Knowledge Management Capability

Knowledge management capability (KMC) was measured as three dimensional construct namely knowledge a*cquisition*, knowledge sharing and knowledge utilization. KMC was measured using a seven point likert scale ranging 1 strongly unsatisfactory to 7 strongly satisfactory. The result of descriptive statistics related to KMC is presented below.

Descriptive analysis of knowledge acquisition

Knowledge *acquisition* is the first dimension of KMC used in this study. Four items were used to measure this dimension. The result from descriptive statistics related to knowledge *acquisition* has been presented below:

Table: 2

Descriptive Statistics of Knowledge Acquisition

Items			N	Mean	Std. Deviation	F	Significance
Knowledge Acquisition			**252**	**3.3948**	**0.73667**	**19.070**	**0.000**
Interaction directly with customers to learn how to serve them better.	KM21a	Public	69	3.17	0.954	13.294	0.000
		Private	183	3.63	0.854		
		Total	252	3.50	0.904		
Market research to know the needs and preferences of the customers and changes if any.	KM1b	Public	69	3.06	0.938	18.099	0.000
		Private	183	3.59	0.865		
		Total	252	3.44	0.915		
Collection of information regarding the competitors regularly.	KM1c	Public	69	3.00	0.874	14.162	0.000
		Private	183	3.42	0.758		
		Total	252	3.31	0.812		
Search through customer and task-related databases to obtain knowledge necessary for the tasks.	KM1d	Public	69	3.07	0.944	8.478	0.004
		Private	183	3.42	0.807		
		Total	252	3.33	0.859		
Total		Public	69	3.0761	0.82505		
		Private	183	3.5150	0.66412		
		Total	252	3.3948	0.73667		

The descriptive statistics of knowledge acquisition reveals that Nepalese commercial banks are facing a week state of knowledge acquisition in their organizations (Mean 3.394 SD 0.737). Both types of commercial banks are found to have a week state of knowledge acquisition (Public: Mean 3.076 SD 0.825, Private: Mean 3.515 SD 0.664). Significant differences exist between the public and private banks in knowledge acquisition (F- 19.07 P- 0.00).

Descriptive Analysis of Knowledge Sharing

The second dimension of KMC used in this study is knowledge sharing. Six different items are used to measure the extent to which diffusion of knowledge is promoted within as well as outside the organization. The result of descriptive statistics related to knowledge sharing is presented below:

Table: 3

Descriptive Statistics of Knowledge Sharing

Items			N	Mean	Std. Deviation	F	Significance
Knowledge Sharing			**252**	**3.6878**	**0.72182**	**10.783**	**0.001**
Employee's willingness of knowledge sharing	KM2a	Public	69	3.13	1.028	12.841	0.000
		Private	183	3.66	1.056		
		Total	252	3.52	1.073		
Encouragement of management for informal discussion	KM2b	Public	69	3.48	.949	0.198	0.656
		Private	183	3.55	1.243		
		Total	252	3.53	1.169		
Encouragement of community of practice	KM2c	Public	69	3.04	0.930	5.468	0.020
		Private	183	3.43	1.233		
		Total	252	3.32	1.169		
Encouragement by management to share knowledge	KM2d	Public	69	3.46	.917	0.252	0.616
		Private	183	3.54	1.147		
		Total	252	3.52	1.088		
Knowledge shariang as a base of performance appraisal	KM2fe	Public	69	3.71	0.956	8.432	0.004
		Private	183	4.16	1.140		
		Total	252	4.04	1.109		
Use of information system for knowledge sharing	KM2gf	Public	69	3.87	1.083	7.186	0.008
		Private	183	4.33	1.254		
		Total	252	4.20	1.225		
Total		Public	69	3.4493	0.59292		
		Private	183	3.7778	0.74665		
		Total	252	3.6878	0.72182		

The descriptive statistics of knowledge sharing reveal that Nepalese commercial banks are facing a week state of knowledge sharing in their organizations (Mean 3.688 SD 0.722). Both types of commercial banks are found to have a weak state of knowledge sharing (Public: Mean-3.449, SD- 0.593 Private: Mean- 3.778 SD- 0.747). Significant differences exist between the public and private banks in knowledge acquisition (F- 10.83 P- 0.001).

Descriptive Statistics of Knowledge Utilization

The third and last dimension of KMC used in this study is knowledge utilization. Five different items were used to measure the degree to which employees retrieve information, process and apply it. The result of descriptive statistics of knowledge utilization has been presented below:

Table: 4
Descriptive Statistics of Knowledge Utilization

Items			N	Mean	Std. Deviation	F	Significance
Knowledge Utilization			**252**	**3.3349**	**0.69938**	**6.741**	**0.010**
Existence of research and educational program	KM3a	Public	69	3.35	0.819	.227	0.634
		Private	183	3.29	0.882		
		Total	252	3.31	0.864		
Promotion of teamwork by utilizing organizational knowledge	KM3b	Public	69	3.32	0.813	1.470	0.226
		Private	183	3.47	0.907		
		Total	252	3.43	0.883		
Use of electronic data to process task	KM3c	Public	69	3.36	0.804	7.693	0.006
		Private	183	3.73	0.973		
		Total	252	3.63	0.942		
Incentive and benefit policies for new idea suggestions	KM3d	Public	69	2.91	0.887	2.477	0.117
		Private	183	3.10	0.813		
		Total	252	3.05	0.836		
Existence of culture of knowledge sharing	KM3e	Public	69	2.81	0.879	22.325	0.000
		Private	183	3.44	0.958		
		Total	252	3.27	0.976		
Total		Public	69	3.1507	0.72307	**6.741**	**0.010**
		Private	183	3.4044	0.67935		
		Total	252	3.3349	0.69938		

The descriptive statistics of knowledge utilization reveal that Nepalese commercial banks have a week state of knowledge utilization in their organizations (Mean 3.335 SD 0.699). Both types of commercial banks are found to have a weak state of knowledge acquisition (Public: Mean- 3.151, SD- 0.723 Private: Mean- 3.404, SD- 0.679). A significant difference exists between the public and private banks in knowledge acquisition (F- 6.741, P- 0.010).

Exploratory Factor Analysis of Knowledge Management Capability
EFA was used to identify the underlying dimensions of KMC in Nepalese commercial banks from the employees' perspective. The 15 items in the questionnaire were analyzed using principal component analysis with varimax rotation.

The theoretical concepts of KMC were taken from previous studies that provide theoretical justification for the present study. Some of the items were modified to match the KMC of Nepalese commercial banks. The result of the exploratory factor analysis of KMC has been presented in the following table.

Table: 5

Exploratory Factor Analysis of Knowledge Management Capability

	Knowledge Utilization	Knowledge Acquisition	Knowledge Sharing-*Employee*	Knowledge Sharing-*Management*	Communalities
Cronbach's α	0.834	0.865	0.835	0.741	
Eigen value	4.426	2.521	1.884	1.484	
% of variance explained (Total 68.767)	29.504	16.808	12.561	9.894	
KM1a		0.798			0.711
KM1b		0.827			0.744
KM1c		0.826			0.713
KM1d		0.822			0.705
KM2a				0.784	0.647
KM2b				0.805	0.651
KM2c				0.823	0.691
KM2d			0.847		0.733
KM2e			0.885		0.814
KM2f			0.846		0.717
KM3a	0.790				0.716
KM3b	0.753				0.656
KM3c	0.778				0.670
KM3d	0.769				0.638
KM3e	0.673				0.508
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.					0.765
Bartlett's Test of Sphericity	Approx. Chi-Square				1652.381
	df				105
	Sig.				0.000

The Bartlett's Test of Sphericity ($p<0.001$) as shown by the above table shows that the factor model of KMC was highly appropriate (Norusis, 1994). The Kaiser-Meyer-Olkin measure of sampling adequacy (0.765) is above the cut point of 0.6. It shows that the samples are adequate for factor model.

The convergent validity or quality of the items that composed each factor was also analyzed based on Pasquali's (2008). Out of the 15 items of KMC, only 1 item KM4e has factor loadings from 0.6 to 0.7. Hence, the factors satisfy the convergent validity.

The correlations between factors of KMC were not above 0.70. Hence, the factors satisfy discriminant validity (Gaskin and Lim, 2016).

The factor structure representing KMC practices are meaningful, useful and conceptually sound. Hence, they satisfy face validity.

The KMC measures were found to be highly reliable. All the factors of KMC showed high reliability, with α coefficients higher than 0.741. Following the recommended threshold recommended by authors such as Nunnally and Bernstein (1994), and Peterson (1994), the factor model can be regarded as reliable.

Discussion and Implication

All three dimensions of KMC were found in unsatisfactory state. The private sector banks were found to have a better position in all three dimensions of KMC than the public sector banks. The analysis of KMC further showed significant difference between public and private banks in all three dimensions of KMC namely knowledge acquisition, knowledge sharing and knowledge utilization.

Four different factors were identified from 15 observed items of KMC. They were knowledge acquisition, knowledge sharing-employee, knowledge sharing-organization and knowledge utilization. The KMO measure of 68.77 showed that the factor model was highly appropriate. The total variance explained by these factors was 68.77 percent which is higher than threshold level of 60 percent. All the factors had α coefficients higher than 0.741. All the factor loadings were higher than 0.673. Hence, the four factor model of KMC is regarded as valid as well as reliable for further analysis.

This study has made an important contribution in understanding KMC in Nepalese banking sector. It is particularly important in Nepalese context where organizations are reluctant in investing in innovative KM practices as they are still not convinced that KMC matters for performance improvement.

Limitations and Directions for Future Research

This study has a number of limitations. First, given the use of cross-sectional data, causality cannot be inferred. It may take a longer time to materialize the KMC. Future research may employ a longitudinal research design that examines the KMC to capture the time lag effects necessary to realize the benefits of the KMC. Another limitation of this study would be the use of subjective measures of KMC.

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