

THE ROLE OF KNOWLEDGE MANAGEMENT IN CREATING AND SUSTAINING HIGH PERFORMANCE ORGANISATIONS THE CASE OF FINANCIAL INSTITUTIONS IN UGANDA

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Abstract: Purpose: The study described in this paper develops an evaluation model aimed at investigating the relationships between knowledge management and objective and perceived organizational high performance. Design/methodology/approach: A comprehensive review of theory, research and practices on knowledge management and high performance develops a model that forms the basis of the study. The model was operationalised in financial institutions in Uganda, and was used as the basis to develop the hypotheses that are tested in the study. Findings: suggests that competitive advantage is a significant predictor of high performance and that the high performance organisation framework is a mediator of knowledge management and high performance. Originality: Among the few empirical studies relating knowledge management and its integration in financial institutions for achieving sustained competitive advantage and high performance. Limitations: The study used a small sample which limits the generalisation of the results. Practical implications: The results may provide a sound basis for making an analysis of KM behaviour and high performance in financial institutions.

Keywords: knowledge management, knowledge based theory, high performance organizations framework, high performance, financial institutions Uganda.

INTRODUCTION

The globalization of financial markets has forced bankers to become more efficient in managing knowledge in their operations (Butod, 2008). The importance of this effi-

ciency in knowledge management (KM) is emphasized by the call from the World Bank to integrate the concepts of KM in banking operations. In this paper we discuss an evaluation model which looks at KM in terms of knowledge acquisition, knowledge dis-

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307

semination and responsiveness to knowledge, as part of a greater high performance organisation (HPO) framework. The paper also discusses how each of these elements can be integrated so that high performance can be enhanced in financial institutions, specifically banks in Uganda. The various components of KM are described in detail so as to explain the role and status of KM in financial operations. The combination of KM and the HPO framework is expected to create a culture that promotes and encourages KM to flourish in the banking sector, leading to increased competitiveness and sustainable high performance.

In order to attain and sustain high performance an organization has to effectively manage knowledge, as knowledge is seen as the leading instrument for organisations to achieve competitiveness and perform better than competitors (Lin, 2007; Pathirage et al., 2008). After all, organizations can only meet the demands of their customers when their employees are knowledgeable about their services and operations. In order to achieve the needed continuous flow of knowledge throughout the organization, employees need to be willing to disseminate and respond to knowledge (Darroch, 2005), and they must have adequate capabilities to do this. In addition, managers need to foster good KM behaviour, which then subsequently can be applied for the benefit of the organization (Stuart, 2004). According to Vorakulpipat and Rezgui (2008) a growing number of organizations have introduced KM into their strategies and as a result have reported business process efficiency improvements, better-organized communities, and higher staff motivation.

To be able to improve productivity and increase profitability, the application of the HPO framework is vital because it contains

characteristics that can be influenced by managers that they can take targeted improvement actions to start achieving superior results (de Waal, 2007). There seems to be a link between KM and high performance, as HPOs find it absolutely essential to move toward a flatter and less hierarchical organization structure, are willing to adopt new working practices, and put an emphasis on empowerment, teamwork, learning, and employee participation, which are all traits of KM (Willcoxson, 2000). These traits lead to an ability to adapt to the changing business environment and to improvements in performance and quality of working life. They make offering better services possible, and provide more efficient and effective internal processes (de Waal, 2007). The literature suggests that the HPO framework mediates the relationship between KM and high performance.

The research findings described in this paper may provide scholars with examples of the mediating effect of the HPO framework on the relationships between KM and high performance. Moreover, the moderating effect of the competitive advantage and the HPO framework on these relationships can be observed and recorded. The research also has practical implications, as the results may provide a sound basis for making an analysis of KM behaviour and competitiveness in financial institutions. In this respect, it has been stated that financial institutions in predominantly regional economies such as Uganda, a country in the sub-Saharan region, ought to focus on KM and therefore HPO (Okot-Uma, 2007). In this way, these institutions can acquire KM and HPO knowledge from the developed economies that can help them to become and stay more competitive. This will help their employees to obtain sufficient capabilities which they can disseminate amongst themselves to help each other, especially in financial institutions which are usually keen on obtaining sustained competitive advantage (Kridan and Goulding, 2006). Over 22 percent of the financial institutions in Uganda are commercial banks and greatly contribute to economic growth and employment (The Budget Report, 2010/11). Improving their performance with KM and the HPO framework will have great economical impact.

Based on the analysis that will take place within the framework of this research, consultants, professional and students of human resource management can in future devise a model that will actively provide clear-cut interventions and facilitate the process of attaining and sustaining financial HPOs in Uganda. Although the analysis itself will have a 'solid' scientific base, it is precisely the contribution of consultants, professionals and students that focus on practically applicable interventions that are in touch with the language and experience of the financial institutions. Before managers of financial institutions are prepared to invest significantly in KM and the HPO framework, they need access to best practices, preferably based upon empirical proof in similar businesses. Researchers and their students can provide financial institutions with information about interventions based on best practices.

The study described in this paper aims to investigate the relationships between KM (independent variable), the HPO framework (mediator), and perceived high performance (objective). It also investigates the moderating effect of competitive advantage upon these relationships. This study will address issues which have yet to be resolved in existing literature, such as the relationships between KM, the HPO framework, competitive advantage and perceived high

performance. A special focus of this study is the investigation of these relationships in financial institutions, since little is known about the KM behaviour and practices in these institutions (Ali and Ahmad, 2006; Harlow, 2008). The remainder of the paper is structured as follows. In the next section the theoretical background of the research is described. Literature on HPOs, KM and competitive advantage is discussed and these topics are related to each other. Then, the research questions and hypotheses which were dealt with in the research are reviewed. This is followed by a description of the research approach and the research results. The paper ends with some conclusions and the limitations of the study.

THEORETICAL BACKGROUND

In this section, the literature on HPOs, KM, competitive advantage and the theories is reviewed.

High performance organizations

HPOs are organizations that achieve results (both financial and non-financial) that are better than those of their peer group over a period of time of at least five to ten years (de Waal, 2007; Lawler, 2007). The concept of the HPO has evolved from research with a link between human resource management and organizational performance. It can also be linked to decision-making and actiontaking in the organization (Blenko, and Rogers, 2006). High performance businesses are more effective than their competitors at exploiting the collective intelligence and motivation of their workforce. There is a strong correlation between financial performance and the priority organisations place on human capital development. If organizations are to meet their important competitive challenges today-fight off competition coming from new players and successfully execute a growth strategy-they must increase the energy and focus with which they address the workforce capabilities necessary to succeed (Accenture, 2009)

High performance framework

The HPO framework consists of characteristics that can be influenced by managers so that they are able to take targeted actions to start achieving superior results (de Waal, 2007). Knowledge based organizations using the HPO framework will obtain the necessary capabilities to increase performance and consolidate a sustainable competitive advantage more easily. According to de Waal (2008) HPO framework factors which are not properly managed by an organisation will have a negative effect on productivity and high performance. The HPO framework as empirically established by de Waal (2007, 2010) is a combination of the frameworks of Kotter and Heskett (1992) and that of Scott Morton (2003). The factors in the resulting framework influence the degree in which organizational member's performance - driven behaviour which in turn designates whether the organization is an HPO (de Waal, 2004). However, there is need for validating the link between the HPO framework and organizational high performance, in order to make sure it is worthwhile for companies to improve themselves in the direction of high performance.

Knowledge Management

KM is a systematic, organized, explicit and deliberate ongoing process of creating, disseminating, applying, renewing and updating the knowledge for achieving organizational objectives. Darroch (2005) and Pillania (2008) have conceptualized KM at the organizational level and proposed three dimen-

sions of KM namely: knowledge acquisition, knowledge dissemination and responsiveness to knowledge. They define knowledge as a whole set of intuition, reasoning, insights, experiences related to technology, products, processes, customers, markets, competition and so on that enable effective action. The more valuable, imperfectly imitable and rare the knowledge is, the higher the performance will be (Wijk et al., 2008). Proper KM depends on an organization's skill to use its intellectual capital and knowledge resources to gain high performance (Guthrie et al., 2008). Part of this intellectual capital consists of human capital, which in turn, reflects the general skills, expertise, and knowledge levels of the employees in the organization (Subramaniam and Youndt, 2005). These knowledge and skills are not only momentarily of importance, but also in the future when employees are assimilating new professional expertise in adjoining areas (Vorakulpipat and Rezgui, 2008). An organization that structurally uses KM will achieve competitive advantage, (Liao, 2009).

Competitive Advantage

Several theories have revealed that competitive advantage (CA) is an indispensable factor in achieving high performance. The level of CA has an important impact on high performance and is related to KM. The nature of firm competititon and the sources of CA in many organisations have shifted towards knowledge based resources (Watson and Hewett, 2006). Firstly, KM can be viewed under the resource based perspective; Kearns and Lederer (2003) consider knowledge as a resource contributing to high performance. Secondly, using the dynamic capabilities view, knowledge can be interpreted as a capability to achieve business goals (Alavi and Leidner, 2001). The dynamic capabilities view reflects unstable environments and deals with the capacity to sense and to seize

opportunities and to reconfigure resources (Teece, 2007). Therefore, the resource-based view serves as the theoretical basis because it provides an appropriate basis for analyzing how internal factors of a firm can contribute to high performance (Lockett et al., 2009). More purposely, we concentrate on the knowledge-based theory posited by (Grant, 1996) which builds on the resource-based view (Alavi and Leidner, 2001; Pitelis 2007).

The knowledge-based view of the firm is a recent approach to understanding the relationship between firm capabilities and firm performance. Specifically, this approach suggests that knowledge generation, accumulation and application may be the source of superior *performance*. Other researchers have conceptualized organizational knowledge in terms of stocks of accumulated knowledge in the firm and flows of knowledge into the firm. This paper tests the relationship between acquisition, dissemination and responsiveness processes of organizational knowledge and firm performance in the financial institutions. We suggest that the theoretical insights of the knowledge-based theory provide a strong basis to explore the nature and importance of the relationship between KM, CA and high performance. The knowledge-based theory further proposes that the ability to successfully deploy resources relies on the knowledge residing in the human capital of a firm and the development of interrelated knowledge across organizational units, with organizational routines as mechanisms of knowledge integration (Grant, 1996). This theory states that knowledge is the most strategically significant resource of the firm. Its proponents argue that because knowledge-based resources are usually difficult to imitate and socially complex, heterogeneous knowledge bases and capabilities among firms are the major determinants of sustained competitive advantage and superior organisational performance (Grant, 1996; Alavi and Leidner, 2001).

Knowledge has replaced other sources of production as the main source of wealth creation. Whereas traditional sources of CA are fading away and are being copied easily, KM has emerged as the source of sustainable CA (Pillania, 2008; Wagner, 2009). Thus the theoretical literature clearly suggests that good KM practices by employees has important implications for achieving organizational high performance, and these KM practices can be positively affected through a high performance framework that creates a focus on continuous improvement efforts to increase CA (de Waal, 2008).

Financial Institutions

Financial institutions are defined as institutions which collect funds from the public and invest these in financial assets such as deposits, loans and bonds, rather than tangible property.

RESEARCH QUESTIONS AND HYPOTHESES

Previous research has not explicitly connected the concepts of KM, CA and high performance study. Therefore the following research questions and hypotheses have been formulated:

Research Question 1: What is the relationship between KM and (objective and perceived) high organizational performance, and does the HPO framework mediate this relationship?

Hypotheses:

H1: KM is positively associated with (objective & perceived) organizational high performance.

H2: The HPO framework mediates the relationship between KM and (objective and perceived) organizational high performance.

Research Question 2: Does competitive advantage moderate the relationship between KM and HPO framework?

Hypotheses:

H3: KM is positively related to the HPO framework

H4: CA moderates the relationship between KM and HPO framework. More specifically, a high quality workforce decreases the strength of positive relationship between KM and HPO framework.

Research Question 3: Does the organization's CA moderate the relationship between HPO framework and (objective and perceived) organizational high performance?

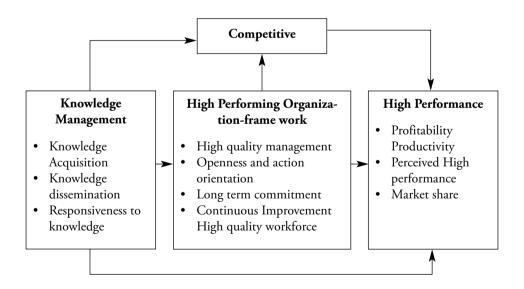
Hypotheses:

H5: The HPO framework has a positive impact on (objective and perceived) organizational high performance.

H6: CA moderates the relationship between the HPO framework and (objective and perceived) organizational high performance.

The theoretical model for conceptualizing the hypotheses has been summarized and is shown in Figure 1. (Appendix)

Figure 1: The theoretical research model (adopted and modified from literature from Darroch, 2005 and de Waal, 2008)



RESEARCH METHODOLOGY

The hypotheses were tested using a combination of both quantitative deductive and qualitative research approaches. As observed by Onwuegbuzie and Leech (2004b) the main goal of mixing methods (mixed method design) is not to seek corroboration but rather to expand the researcher's understanding. The combination of various research approaches and paradigms provides an opportunity for triangulation of information (Ghauri and Grohaug, 2002). The study employed a cross-sectional survey design. Survey methodology gives more control over the research process as it makes use of a questionnaire in which the data can be standardized allowing for easy comparison (Saunders et al., 2003). The respondents were employees and managers of financial institutions based in Uganda. The respondents were those holding numerous responsibilities at middle and higher occupational levels within the financial institutions in Uganda.

The participating financial institutions (FIs) were identified through the Bank of Uganda's supervision department list. To prevent a common method bias, the study obtained data on the independent and dependent variables from different sets of respondents (Podsakoff et al., 2003). Ten FIs were purposively selected from the districts of Kampala, Mukono, and Wakiso and managers from each institution were identified as a unit of inquiry. A questionnaire containing items measuring the three subdomains of KM (knowledge acquisition, knowledge dissemination and responsiveness to knowledge) attributes, HPO framework, competitive advantage and high performance was distributed to 50 employees. A total of 33 employees (64%) returned usable questionnaires, 17 incomplete questionnaires were excluded from this final sample. The final sample consisted of 7.9 percent females and 92.1 percent males. All respondents had attained a first university degree and above. The data on KM and its variables (independent) was obtained from employees. The data on the CA (moderator) was also obtained from employees. The data for the HPO framework (mediator) were obtained from both employees and managers, and data on objective and perceived organizational high performance (dependent) were obtained from supervisors and senior managers and by collecting secondary data.

Measurement

The concept of KM was measured using the thoroughly validated five dimensions scale of KM developed by Darroch (2005), which has 21 items with 6 referring to knowledge acquisition, 5 refer to knowledge dissemination and 5 to responsiveness to knowledge. The HPO framework was measured by the scale developed by de Waal (2007, 2010). This scale has 35 items: eleven items refer to high quality management, six items refer to openness and action orientation, six items refer to long term orientation, eight items refer to continuous improvement and four items refer to high quality workforce. CA was measured using the Porter (2001) measurement scale. The items were scored on a ten-point Likert scale, ranging from 1 (strongly disagree) to 10 (strongly agree). Objective organizational high performance was measured using work of Huselid (1995). Perceived high organizational performance was measured using Delanay and Huselid's (1995) two scales on perceptions of organizational performance. The first scale consists of eight items assessing respondents' perceptions of their firm's performance over the past five years relative to that of similar organizations (perceived

organizational performance). The second scale consists of two items concerning respondents' perceptions of their firm's performance over the past five years relative to product, market competitors (perceived market performance).

Descriptive Statistics

In order to summarize and understand the observed data, means and standard deviations were generated. The main purpose was to establish whether the statistics were a good fit of the observed data (Field, 2006; Saunders et al., 2007). Critical analysis re-

vealed that all mean scores of the constructs in question ranged from 4.4 to 8.0, with standard deviations between 0.179 and 0.312. Because of the small standard deviations, it was clear that the data points were close to the mean, hence the model (mean) was a good replica of reality (Field, 2006; Saunders et al., 2007). Means, standard deviations, and reliability estimates of the study variables are presented in Table 1 which reveals that the measures exhibited appropriate internal consistency reliability. With all α 's almost at 0.9, with some being 0.7, the researchers concluded that the reliability was quite high.

Table 1. Descriptive Statistics

Construct	Mean	Variance	Std. Deviation	Cronbach	No. of Items	Deleted	Remain- ing
KM	128.26	1175.865	34.291	0.959	41	21	19
KA	67.19	425.695	20.632	0.953	16	6	10
R to K	33.72	94.725	9.733	0.901	14	14	5
KD	27.67	54.792	7.202	0.84	11	11	4
HPOF	148.931	1973.209	44.4208	0.967	35	12	23
OAO	61.17	380.833	19.515	0.944	6	-	9
MQ	46.438	229.415	15.1465	0.963	11	5	7
CIR	24.58	88.689	9.418	0.908	8	4	4
WQ	17.61	49.621	7.044	0.855	3	1	3
C Adv.	58.28	204.015	14.283	0.915	8	0	8
R	44.66	135.588	11.644	0.927	6	0	6
	13.63	16.952	4.117	0.84	2	0	2
HP	68.96	250.925	15.841	0.894	10	0	10
Produc	57.31	187.365	13.688	0.925	8	0	8
	11.63	20.171	4.491	0.646	2	0	2

To prove that the measures used are stable and dependable (Anastasi, 1982; Nunnally, 1978). The internal consistency approach was used because we wanted to measure the extent to which the instrument had identical or homogeneous content. The Cronbach alpha coefficients of study variables were computed because of the diversity of constructs, variables with a cut off point of 0.7 Nunnally (1978) and Cronbach (2007) were found suitable for the study. The instrument measured six variables with a total of 113 components. 73 of the components had an alpha coefficient above 0.7 after adjustments. The variables with Cronbach alpha coefficients below 0.7 were improved to attain a desired target by deleting some items as indicated in the table 3. With the exception of the two items whose loadings were below the cut-off point of alpha coefficient of 0.7, the rest had alpha coefficients that are above the minimum accepted ratio of 0.7 (Nunnally, 1978; Grayson, 2004 & Garson, 1999). This was proof that the item scales chosen to measure each dimension were consistent and dependable.

EMPIRICAL RESULTS

In this section the results of the research are described.

In order to identify patterns in data, and expressing the data in such a way as to highlight their similarities and differences, we conducted a principle components analysis. The extracted factors have been used by the researchers in subsequent tests in the validation of the instruments and testing of the model. KM sub-domain items (knowledge acquisition, knowledge dissemination and responsiveness to knowledge) were subjected to the principle component analysis and the extracted factors and items were; knowledge acquisition, responsiveness to knowledge, and knowledge dissemination, respectively.

The results also indicate that among the three variables, knowledge acquisition accounted for the most variance in the KM components. The extracted factors for the high performance organisation framework were; high quality management, high quality work force and openness and action oriopenness and action with entation, orientation accounting for the greatest variance. The extracted factors for competitive advantage were capabilities and resources; the results also indicate that capabilities account for more variance in competitive advantage. Finally, the high performance components or items for different variables were extracted as follows- productivity and skill. The results indicate that among the two variables, productivity accounts for more variance in the high performance construct.

The appropriateness of the instrument was measured by carrying out content validity and construct validity (Lewis et al., 1999, and Saunders et al., 2007). On the basis of the guidance of scholars (Churchill, 1979 and Ehlert, 2004) adequacy and correctness of the instrument was assessed with the help of experts from different disciplines mainly human resource, strategic management, and psychology. To estimate the degree to which any two measures are related to each other the researchers used the correlation coefficient. Items that correlated highly with global variable were enough proof that they are related. To establish the convergent validity of knowledge dissemination, knowledge acquisition, responsiveness to knowledge, competitive advantage high performance. Correlations were run and they were all significant at 0.01 level (2- tailed) with their global variables a true test that their items measure, knowledge acquisition, dissemination, responsiveness to knowledge, high performance organisation

framework, competitive advantage and high performance.

Convergent validity

Convergent validity can be assessed from the measurement model by determining whether each indicator's estimated pattern coefficient on its underlying construct factor is significant (greater than twice its standard error) (Anderson, and Gerbing, 1988). In factor analysis, the T-value of all items in this research were between 5.62 and 14.77, so they all exceeded 1.96, which indicates that all observation items are significant in representing latent variables.

Discriminant Validity

Following Anderson and Gerbing, (1988), we tested the discriminate validity, which can be assessed for two estimated constructs

by constraining the estimated correlation parameter between 0 to 1.0 and then performing a chi-square difference test on the values obtained for the constrained and unconstrained models (Joreskog, Bagozzi and Phillips (1982, p. 476) state that "A significantly lower \(\bar{\cup}^2 \) value for the model in which the trait correlations are not constrained to unity would indicate that the traits are not perfectly correlated and that discriminant validity is achieved." In our study, the values of $\Delta_{\mathbf{r}}$ 2 is between 10.67 and 82.3. All values are exceeded 3.84, indicating that our study achieved discriminant validity. An attempt was made to assess the extent to which global variables are interrelated more especially how they are associated with high performance (dependent variable); findings are shown in Table,2

Table 2. Correlations between global variables

		кмм	PHOFF	CAA	НРР
KMM	Pearson Correlation	1			
	Sig. (2-tailed)				
HPOFF	Pearson Correlation	.782**	1		
III OI I	Sig. (2-tailed)	0			
CAA	Pearson Correlation	.841**	.808**	1	
C/L/I	Sig. (2-tailed)	0	0		
	Pearson Correlation	.521**	.431*	.576**	1
HPP	Sig. (2-tailed)	0.002	0.012	0	
	N	33	33	33	33
**. Corre	lation is significant at the 0.0				33

The results in Table 2 indicate that global variables namely: knowledge management (KMM), competitive advantage(CAA), the high performance organisation framework (HPOFF), are related to high performance (HPP) and are all significant at P< 0.01. The findings also indicate that competitive advantage accounts for highest variance in high performance, followed by the HPO framework and KM in this order. The results indicate that there is a high correlation among the global variables.

Model fit

The researchers also tested whether what was predicted or hypothesized and what the literature said were in line with the results. The researchers formulated the models and tested the hypotheses and also assessed the level of multicollinearity in the model by carrying out regression tests. The formulated models and results are shown in Tables 3 and 4.

The model for research question 1. (What is the relationship between KM and (objective and perceived) high organizational per-

formance, and does the HPO framework mediate this relationship?) and its hypotheses (KM is positively associated with (objective and perceived) organizational high performance + The HPO framework mediates the relationship between KM and (objective & perceived) organizational high performance) are as follows:

$$HP = a + b_1A + b_2D + b_3R + b_4C + b_5F + e...$$
 (i)

Where HP – High performance

Is a constant b_{1} , b_{2} and b_{3} are coefficient values

A, D & R, represent acquisition, dissemination & responsiveness to knowledge.

C and F represent competitive advantage and HPO framework respectively.

The results for this model are given in the Table 3.

Table 3. The regression analysis for KM, CA & High Performance Organisational Framework on High Performance

Model		Unstandardized Coefficients		Standard- ized Coeffi- cients	t	Sig.	Correlations			Collinearity Statistics	
		В	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	4.587	0.893		5.136	0					
1	HPOFF	0.345	0.13	0.431	2.662	0.012	0.431	0.431	0.431	1	1
2	(Constant)	3.366	0.946		3.559	0.001					
	HPOFF	-0.079	0.202	-0.098	-0.389	0.7	0.431	-0.071	-0.058	0.347	2.881
	CAA	0.543	0.209	0.655	2.594	0.015	0.576	0.428	0.386	0.347	2.881
3	(Constant)	3.257	0.973		3.347	0.002					
	HPOF F	-0.121	0.216	-0.151	-0.559	0.581	0.431	-0.103	-0.084	0.311	3.211
	CAA	0.455	0.258	0.548	1.765	0.088	0.576	0.311	0.266	0.235	4.263
	KMM	0.152	0.251	0.178	0.606	0.549	0.521	0.112	0.091	0.263	3.802
Dependent Variable: High performance (HPP)											

The results in Table 3 indicate that after entering all the variables (i.e. both criterion and mediating variables) in the model, competitive advantage and HPO framework came out as strong variables and significant levels at 0.000 and 0.012 respectively. These results fairly match the researchers' predictions in the hypotheses. The collinearity diagnostics (i.e. VIF and Tolerance) indicate that the multicollinearity problem among the predictor variables does not exist because all the values are below the cut-off value according to the rule of 10; which advocates for a threshold VIF of 10 (O'Brien, 2007; Scott, 2003; Kutner, 2004, Chong Ho Yu, 2008). This is an indication that predictor variables are not highly related and therefore each can account for the variance in high performance (Kutner, 2004; Bowerman and O'Connel, 1990; Field, 2006; Chong Ho Yu, 2008).

The second model tested the direct relationship between knowledge management sub-domains and high performance as hypothesized by the researchers. The model for research question 2 (Does competitive advantage moderate the relationship between KM and HPO framework?) and its hypotheses (KM is positively related to the HPO framework + CA moderates the relationship between KM and HPO framework) is as follows:

$$HP = a + b_1A + b_2D + b_3R + e...(ii)$$

The results for this model are given in the Table 4.

Unstandardized Standardized Correlations **Collinearity Statistics** Coefficients Coefficients Model Sig. Zero-order Partial Part Std. Error Beta Tolerance VIF (Constant) 3.333 0.929 0.001 3.588 1 CAA 0.478 0.122 0.576 3.924 0.576 0.576 0.576 (Constant) 3.243 0.961 3.373 0.002 2 CAA 0.39 1.714 0.097 0.576 0.255 0.293 0.228 0.471 0.299 3.412 0.107 0.235 0.456 0.652 0.521 0.083 0.068 0.293 **KMM** 0.125 3.412 a. Dependent Variable: HPP

Table 4. The regression analysis for CA, KM and high performance

It can be seen from Table 4 that the only variable that has a significant contribution to high performance is competitive advantage (Sig.0.000). It explains the high performance variance by 57.6% ($R^2 = 0.576$).

Research Question 3: Does the organization's CA moderate the relationship between HPO

framework and (objective and perceived) organizational high performance?

Hypotheses:

The HPO framework has a positive impact on (objective and perceived) organizational high performance. + CA moderates the relationship between the HPO framework

and (objective and perceived) organizational high performance.

The results for this model are given in the Table 5.

 $HP = a + b_{\Delta}C + b_{5}F + e...$ (iii)

Table 5. Regression analysis for the High Performance Framework and High Performance

Model	Unstandardized Coefficients		Standard- ized Coeffi- cients	t	Sig.	Correlations			Collinearity Statistics	
	В	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	4.587	0.893		5.136	0					
HPOFF	0.345	0.13	0.431	2.662	0.012	0.431	0.431	0.431	1	1

In Table 5 the results show that the HPO framework has a significant relationship with high performance at (Sig.012). It explains the high performance variance by 43.1% ($R^2 = 0.431$).

RESEARCH FINDINGS

Our statistical analysis yielded the following findings; First, KM has no influence on high performance, therefore our H1 was rejected, KM was positively related to competitive advantage, and hence, H4 is supported. Second, KM is positively related to the HPO framework, and H3 is accepted. The HPO framework was established a perfect mediator between KM and high performance. Among the three dimensions of KM; knowledge acquisition has the greatest positive influence on the HPO framework. Therefore the H2 is partially supported.

Third, thus, CA moderates the relationship between KM, the HPO framework and high performance. H4 is supported. Fourth, the HPO framework has a positive impact on (objective and perceived) organizational high performance hence, H5 is supported. Finally, CA moderates the relationship between the HPO framework and (objective and perceived) organisational high performance. The H6 was supported, the implication is that KM is not directly related to high performance, but it could have an influence if mediated and moderated by the HPO framework and competitive advantage respectively. We found that KM affects high performance when the HPO framework is in place.

CONCLUSION

This study investigates the role of KM, HPO framework, competitive advantage and high performance in financial institutions. In this research, we put into operation three constructs that are used to determine high performance; KM, the HPO framework, and competitive advantage. It was established that the HPO framework is not only related to CA and KM but also to the

overall organisational high performance. This is more comprehensive than the findings of Wagner, (2009), that KM leads to competitive advantage. Though, Pillania (2008) found KM to be positively related with high performance, he did not test for the mediating influence of the HPO framework.

Implications

The research shows that KM could affect high performance indirectly. This does not mean that knowledge is not important, but the relationship of KM, HPO framework, CA and high performance is more critical for managers. In other words, with a good high performance organisation framework, KM could successfully increase high performance beyond that of its competitors (Liao, et al., 2007). Thus, KM (acquisition) will be more meaningful to employees when supported by the HPO framework. Because the knowledge of an organisation is developed progressively, from acquisition, dissemination and response to knowledge, CA must be related to existing knowledge, including the experience and the structure of knowledge. Nieto and Quevedo (2005), found that different outside environments or industry sectors have different impacts on high performance. The same backgrounds of knowledge increase the flows of knowledge and the difference of knowledge help identify individuals. Based on the existing knowledge in the organisations, performance can be sustained (Darroch, 2005).

High performance not only focuses on financial or market share, but also on process and management. For sustainability of high performance, organisations should adapt the HPO framework. If we consider an institution as a system, knowledge as it's input, the HPO framework as it's processing and high performance as its output. By managing the

knowledge organisations acquire, disseminate and respond to knowledge which they can translate into sustained competitive advantage and high performance. The concepts of KM, the HPO framework, CA and (objective and perceived) high organizational performance appear to be an important and promising set of variables.

Limitations

There was a methodological limitation of using a small sample which limits the generalisability of the results into developing countries. In this study we consider CA as a moderator but we do not know whether or not organisational culture also influences high performance. This could be another moderator which would be a topic for further research. Organisational learning could promote KM, which means that we can acquire, disseminate and respond to knowledge through organisational learning in order to attain high performance. Given contextual issues and the fact that some results were not anticipated, there is a need to widen the study scope.

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REFERENCES

- Alavi, M. and Leidner, D.E. (2001). Review: Knowledge Management and Knowledge Management Systems: Conceptual Foundations and Research Issues. MIS Quarterly, 25 (1), 107 – 136, 107 – 136.
- Ali, H.M. and Ahmad, N.H. (2006). "Knowledge Management in Malaysian Banks: A New Paradigm". Journal of Knowledge Management Practice, Vol.7 (3) September, 2006.

- Amin, M. (2005). "Social Sciences Research" Conception, Methodology and Analysis.
- Makerere University Printers, Kampala.
- Anderson, J.C. and Gerbing, D.W. (1988). Structural equation modelling in practice: A review and recommended two-step approach. Psychological Bulletin 103(3), 411 – 423.
- Bagozzi, R. and Yi, Y. (1982). "On the evaluation of structural equation models," Journal of the Academy of Marketing Science, Vol.16, No.1, pp. 74 94.
- Bounties, N. (2002). "There is a price on your head: managing intellectual capital strategically", Business Quarterly, summer, pp.40 47.
- Bowerman, S. and O'Connel, P. (1990). "Solving Multicollinearity in Process of fitting Regression", www.spring link.com/index/j58255505450u607.pdf.
- Blenko, P. and Rogers, M. (2006). The highperformance Organisation: making good decisions and making them happen. In a Handbook of Business Strategy, (pp.133-141). Emerald Group Publishing Limited.
- Bray, D. (2005). Literature Review- Knowledge Management Research at the Organisational level. Retrieved Feb. 2010, from http://ssrn.com/abstract=991169.
- Butod, M. (2008). Islamic Bank Approach to Knowledge Management. Technorati Tags: Essay samples: Banking Essay Samples.
- Carmeli, A. and Tishler, A. (2004). "The Relationships between Intangible Organisational Elements and Organisational Performance".

 Strategic Management Journal, 25(13), 1257 1278.
- Cabrita, M., and Vaz, J. (2006). "Intellectual capital and Value Creation: Evidence from The Portuguese Banking industry". The Electronic Journal of Knowledge Management. Vol. 4, No. 1, pp 11 20.
- Churchill, G.A. (1979). A paradigm for developing better measures of marketing constructs.

- Journal of Marketing Research (pre-1986). Feb 1979; 16.
- Chong, H.Y. (2008). "Multicollinearity variance inflation and othogonalization in regression", Journal of Statistical models, Vol.2, No 3, pp.31 – 35.
- Consultative Group to assist the poorest (CGAP), (2000). "Consultative Group to assist the Poorest", available at: www.cgap.org
- Cronbach, L. (1951). "Coefficient alpha and the internal structure of tests," Psychometrika, Vol, 16, No.3, pp.297 – 334, 1951.
- Dalaney, J.T. and Huselid, M.A. (1996). "The Impact of Human Resource Management Practices, on Perceptions of Organisational Performance." Academy of Management Journal, 39(4), pp. 949 – 969.
- Darroch, J. (2005). Knowledge management, innovation and firm performance. Journal of Knowledge Management, Vol.9 (3), 101 115.
- de Waal, A. (2008). The role of Information Technology in the High Performing Organization, white paper.
- de Waal, A.A.(2004). The Secret of High Performance Organisations.
- de Waal, A.A. (2007). "Characteristics of High Performance Organisations". Business Strategy Series, Vol.8 No.3, Emerald Publishing Limited.
- de Waal, A.A. (2010). "Characteristics of High Performance Organisations". Forthcoming.
- Ehlert, U. (2004). Construct validity and clinical implications. Problems Model (IIP-C):
- Eisenhardt, K.M. and Martin, J. (2000). "Dynamic Capabilities: What are they?" Strategic Management Journal, 21 (10-11), 1105 – 1121.
- Field, A., (2006). Discovering Statistics Using SPSS, 2nd edition, Prentice, Sage Publications. London.
- Freeze, R and Robles, J.A. (2005). Knowledge Process Support: A Business Study of

- Knowledge Management System. The Eleventh Americas Conference on Information Systems, Omaha, NE, USA August 11th – 14th 2005. Omaha, NE, USA.
- George, P. and Shirley, A.H. (1997). "The measurement of service quality: a new Pivotal-Core-Peripheral attributes model", Internal Journal of Quality and Reliability management.
- Ghauri, P. and Grohaug, K. (2002). Research Methods in Business Studies: A Practical Guide. 3rded Prentice Hall (Essex).
- Grant, R. (1996). "Prospering in dynamically competitive Environments: Organisational Capability as Knowledge Integration". Organisational Science, 7(4), 375 – 387, 7 – 16.
- Guthrie, J.P., Liu, W., Flood, P.C. and MacCurtain, S. (2008). "High performance work systems, workforce productivity, and innovation." A comparison of MNCs and indigenous firms (LInK Working Paper Series 04 08). Retrieved September 6, 2009, from http:/link.dcu.ie/wp0408.pdf.
- Gupta, A. and McDaniel, J. (October 2002). "Creating Competitive Advantage by Effectively Managing Knowledge: A Framework for Knowledge Management." Journal of Knowledge Management Practice, October 2002.
- Harlow, H. (2008). The Effect of tacit Knowledge on Firm Performance. Journal of Knowledge Vol.12 No.1, pp. 148 –163.
- Huselid, M. (1995). "The Impact of Human Resource Practices on turnover, productivity and corporate financial performance." Academy of Management Journal, 38(3), 635 672.
- Huselid, M.A., and Rau, B. (1997). The determinants of high performance work systems: cross-sectional and longitudinal analyses. Paper presented at the 1997 Academy of Management Annual Conference, Boston, A.
- John, S.V. (2009). "Likert scales: Dispelling Confusion" www.ourworld.Compuserve.com/ Vol.14, No.3, pp.260- 286.
- Joreskog, K. (1971). "Simultaneous factor analysis in several population", Psychometrika, Vol.36, No.4, pp.409-426.

- Kaplan, B. and Duchon, D. (1988). "Combining Qualitative and Quantitative Methods in Information Systems Research: A case study," MIS Quarterly (12:2) 1988, pp.571-587.
- Kotter, J.P. and Heskett, J.L. (1992). Corporate culture and performance. Free Press, New York
- Kridan, A.A. (2006). "A case study on Knowledge management implementation in the banking sector. VINE." The journal of information and knowledge management systems, Volume 36, Number 2, 211- 222.
- Khandekar, A. and Sharma, A. (2005). "Managing human resource capability for sustainable Competitive advantage". Education and Training, Vol.47, No.8/9, pp.645-666.
- Kutner, N. (2004). "Applied Linear Regression Models", 4th edition, McGraw-Hill Irwin.
- Lawler, E. 1. (2007). "Toward High-Performance Organizations". Journal of Performance Improvement, Vol.41 No.3, pp. 8 – 12.
- Liao et al., (2007). "Relationships between knowledge Inertia, Organizational Learning and Organization innovation". Learning and Organization innovation". Science Direct Technovation 28, 183 195.
- Likert, R. (2007). "Likert Scales and Surveys best practices". www.intelligentmesuarement.wordpress.com/2010/03/20 likert scale-surveys-best-practices/-91
- Lin, H.F. (2007). "Knowledge sharing and firm innovation capability: an empirical study". International Journal of Manpower. Vol. 28 (3/4), 2007, 315-332.
- Lockett, A., Thompson, S. and Morgenstern, U. (2009). The development of the Resource-based view of the firm: a critical appraisal. International Journal of Management Reviews. 11, 1: 9 – 28
- Melville, N., Kraemer, K. and Gurbaxani, V. (2004). "Information technology and organizational performance: an integrative model of IT business value", Management Information Systems Quarterly. Vol. 28 No.2, pp.283 322.

- Nieto, M. and Quevedo, P. (2005). "Absorptive capacity, technological opportunity, knowledge spillovers, and innovative effort," Technovation. Vol.25. No. 10, pp.1141 – 1157.
- Nunnally, J.C. (1978). Psychometric theory (2nd ed.). New York: McGraw-Hill.
- O'Brien, Robert M. (2007). "Detecting Multi-collinearity." The American Statistician 36(3): 158-60. 4.
- Okot-Uma, R. (2007). A Commonwealth HIV/AIDS Framework for Human Resource Management in the Public Sector. Commonwealth Secretariat, London,
- Pathirage, C., Haigh, R., Amaratunga, D. and Baldry, D. (2008). "Knowledge Management practices in facilities organisations: a case study". Journal of Facilities Management, Vol.6 No. 1., 5 22.
- Penrose, E. (1959). The Theory of the Growth of the Firm, New York: Wiley.
- Pillania, R. (2008). Knowledge Management for High Performance: Indian Industry Perspective. Productivity, 47, No.2, 35 – 48.
- Pitelis, C. (2007). "A Behavioural Resource Based View of the Firm: The Synergy of Cyert and March (1963) and Penrose (1959)." Organisation Science, 18 (3), 478 – 490.
- Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y. and Podsakoff, N.P. (2003). "Common methods bias in behavioural research a critical review of the literature and recommended remedies." Journal of applied psychology, 88(5), pp. 879-903.
- Porter, M.E. (2001). The competitive advantage of Nations.
- Reid, F. (2003). "Creating a knowledge sharing culture among diverse business units", Employment Relations Today, Vol.30 No.3, pp.43 9.
- Richard, B. (2008). Barret Value centre. Retrieved December 2009, from www.valuecentre.com.

- Saunders, M., Lewis, P. and Thornhill, A. (2003). Research Methods for Business Students. Harlow: Pearson Education.
- Saunders, M., Lewis, P., & Thornhill, A. (2007). Research Methods for Business Students, 4th edition. London, Prentice-Hall.
- Scott, M.L. (2003). "Multicollinearity challenge" Discovering Statistics in business.
- Bantam Doubleday Dell Publishing Group, New York, NY.
- Stewart, T.A. (1997). "Intellectual Capital: The new wealth of organizations, Bantam Doubleday Dell Publishing Group, New York, NY.
- Stuart, G. (2004). "Perceptions of senior managers towards knowledge-sharing behaviour" Management Decisions.
- Sveiby, K.E. (2001). "The New Organizational Wealth": Managing and Measuring Knowledge-based Assets, Berret-Koehler Publishers, San Francisco, CA.
- Subramaniam, M. and Youndt, M.A. (2005). "The influence of intellectual capital on the types of innovative capabilities", Academy of Management Journal, Vol. 48 pp.450-63.
- Teece, D. (2007). "Explicating Dynamic Capabilities: The Nature and Micro foundations of (Sustainable) Enterprise Performance." Strategic Management Journal, 28(13), 1319 1350.

- Vorakulpipat, C. and Rezgui Y. (2008). "An evolutionary and interpretive perspective to knowledge management", Journal of Knowledge Management, pp, 17-34.
- Wagner, H. (2009). IT Business Alignment and Process Performance: Results from a Survey in the Finance Industry in Germany.
- Watson, S. and Hewett, K. (2006), A Multi-Theoretical Model of Knowledge Transfer in
- Organizations: Determinants of Knowledge Contribution and Knowledge Reuse. Journal of Management Studies, Vol. 43 No. 2 March pp.141
- Wagner, H.T. and Weitzel, T. (2007). "Towards an IT production Function". Journal of Enterprise Information Management, pp. 380 – 395.
- Wijk, R.V., Jansen, J.J.P. and Lyles A.M. (2008). "Inter-Intra-Organisational Knowledge Transfer: A Meta-Analytic Review and Assessment of its Antecedents and Consequences." Journal of Management Studies 45(4)2008.
- Willcoxson, L. (2000). "Defining and Creating a High Performance Organisation". Australian Journal of Management & Organisational Behaviour.4 (1), pp. 100 – 106.
- Vickers, M., Overbolt, H. and Morrison, L. (2008). High-performance organisations: finding the elements of excellence. American Management Association.