Learning Factors of Public Sector Accountants and Sharing Process of Tacit Knowledge

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ABSTRACT

Knowledge Management (KM) implementation in the public sector organization can take advantage the sharing process of experiences, ideas and expertise of its professional intellects for the organization's embedded knowledge assets. The objective of this paper is to investigate the relationship between the learning factors of professional intellects and the sharing process of tacit knowledge in a public sector accounting organization. A survey questionnaire was used to collect data from all public sector accountants working in the accounting specialist department of the Federal Government in Malaysia. Using factor analysis and multiple regression analysis, the empirical result showed that training and learning opportunities provided to public sector accountants has a high significant impact on the sharing performance of tacit knowledge. It was also found that performance evaluation and incentives together with the ICT skills and know-how are the moderately significant learning factors for an effective leveraging of the public sector accountants for the organizational embedded knowledge assets.

Keywords
Knowledge Management, Sharing Process, Tacit Knowledge, Learning Factors, Public Sector Accountants

1.0 INTRODUCTION

In the knowledge based economy era, the success of an organization lies more in its intellectual capital and system capabilities than its physical assets and financial capital. Therefore, professional intellects are an important source of intelligence for most organizations (Quinn, Anderson & Finkelstein, 1996). Managers, lawyers, doctors, systems analysts, accountants are all professional intellects or knowledge workers who are the product of experiences, values, processes, education with the ability to be creative and innovative aligned with corporate culture (Awad & Ghaziri, 2004).

The problem statement of this study is to fill up the unexplored research gap by focusing on how to harness the tacit knowledge of professional intellects and to convert individually held tacit knowledge into organization held explicit knowledge. There may be little research or none carried out in a public sector accounting organization in Malaysia which focused on the sharing process of tacit knowledge by public sector accountants to improve the knowledge flow performance and the value of embedded organizational knowledge. Hence, the contribution of this study is to identify the learning factors of public sector accountants that could contribute significantly to the sharing process of accounting knowledge in people's head (called tacit knowledge) to improve the value of explicit organizational knowledge in accounting documents, processes, databases (called explicit knowledge).

The objective of this study is to investigate the positive significant relationship between the learning factors of public sector accountants and the sharing performance of tacit knowledge. As a result, this empirical study attempts to find the relationship between six (6) learning factors of public sector accountants and the sharing performance of tacit knowledge. The six (6) learning factors of public sector accountants identified in this case study organization are: 1) ICT know-how and skill, 2) job training, 3) job rotation, 4) feedback on performance evaluation 5) learning opportunities and 6) information sourcing opportunities.

A survey questionnaire was used to collect data from all public sector accountants working in the accounting specialist department of the Federal Government in Malaysia. This selected knowledge intensive accounting organization has a large pool of public sector accountants and the core competencies of the organization are to provide timely accounting information and quality accounting services to all agencies of the Federal Government.

In the following sections, the important scope of literature definitions are highlighted in section 2 and the conceptual framework and hypotheses development are discussed in section 3. This is followed by the section 4 to explain the survey research and data collection method. Research findings and discussion are included in section 5 and finally section 6 provides the conclusions of this research paper.

2.0 LITERATURE REVIEW

KM is a multi-disciplinary in nature and there are many different definitions of KM and KM process being proposed by various KM researchers from different discipline (Gupta, Iyer & Aronson, 2000; Edwards, Collier & Shaw, 2005). In this study, KM is defined as the process of managing, leveraging and articulating knowledge, skills and expertise of professional intellects to enhance the value of knowledge assets through knowledge sharing process (Salleh, Syed-Ahmad & Syed-Ikhsan, 2008). Among KM processes, the knowledge flow in the knowledge sharing process is the cornerstone of KM (Szulanski, 1996) and the ability to share knowledge is a basic tenet of KM if KM is to survive (Liebowitz, 1999).

Nonaka and Takeuchi (1995) claimed that an organization possesses two types of knowledge and classified it as tacit and explicit. Tacit knowledge is "know how" knowledge that is embedded in the expertise and experience of individuals and groups. On the other hand, explicit knowledge is the "know-what" knowledge that can be codified in organizational procedures, documents and software. In this study, KM is defined as the process of managing, leveraging and articulating knowledge, skills and expertise of professional intellects to gain the value of embedded knowledge assets through knowledge sharing process of tacit knowledge (Salleh et al., 2008).

However, the learning factor of professional intellects is considered as an integral part of KM enablers in the sharing process of tacit knowledge. Learning in KM is described by Stankosky (2005) as the acquisition of knowledge or skill through study, experience or instruction and social interactions. KM is a concept and practice that can enable the organization's employees to learn from each other as well as from prior experiences of former employees through the use of learning mechanisms. Some examples of learning mechanisms in KM are analogies and metaphors, brainstorming retreats, mentor-mentee programmes, job training, learning opportunities, employee rotation across departments, communities of practices and traditional hierarchical relationships (Becerra-Fernandez, Gonzalez & Sabherwal, 2004). In addition, feedback on formal performance evaluation is also an important learning mechanism for professional intellects like accountants who need to be evaluated, to compete, to know how they have excelled against their peers (Quinn, et al., 1996).

3.0 CONCEPTUAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

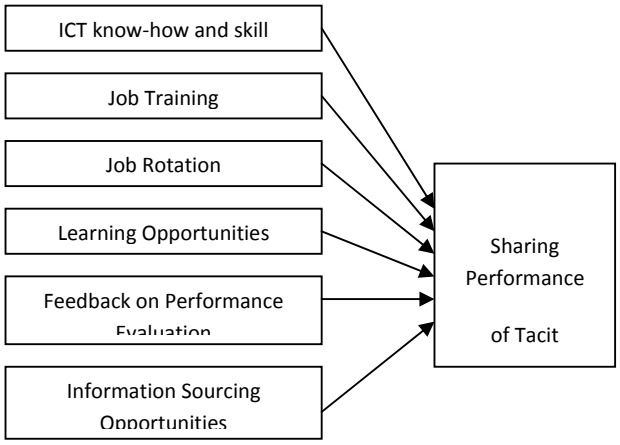

Figure 1: Conceptual Framework

From the literature review on KM, the conceptual framework for this study will be based on Beckman (1999), Starkosky (2005); Taylor, Yamamura, Stedham, & Nelson (2002); Taylor (2004) and Syed Ikhsan and Rowland (2004a). Figure 1 depicts the effects of the learning factors of professional intellects in a public sector accounting organization on the sharing performance of tacit knowledge.

Drawing from the extensive review of literature, the following Table 1 shows the summary information of literature review of study variables to support the conceptual framework and hypotheses testing.

Table 1: Summary Information of Literature Review For Hypotheses Testing

Study Variables	*Literature Review*
ICT Know-How and Skills	*The more trainings provided for ICT skill upgrading, the more knowledgeable the person will have using all the ICT tools and KM technologies and hence, more knowledge can be transferred and shared within and outside the organization (Syed-Ikhsan and Rowland, 2004b).*
Job Training	Knowledge gained by employees, through job training, will enable them to translate their knowledge into the organization's routines, competencies, job descriptions and business processes, plans, strategies and cultures (Holsapple and Singh, 2003).
Job Rotation	*Through job rotation programs, part of knowledge and experience acquired from a prior department may be transported to the new department (Bogdanowicz and Bailey, 2002).*
Feedback on Performance Evaluation	*Feedback on performance evaluation is an important motivator of professionals as it is a means of receiving information required to develop greater expertise and advancement within their profession (Taylor et al., 2002).*
Learning Opportunities	*Demonstrated interest in career planning, financial resources or incentives provided to attend conferences or opportunity to pursue life long learning are examples of professional staffs' needs for nutrient information (Shapero,1985).*
Information Sourcing Opportunities	*The concept of information consciousness is concerned with the organization's attitude towards valuing information as a resource and the consequent processes of making organizational learning available to all by facilitating knowledge transfer and sharing amongst the professional staff (Brown and Starkey, 1994). Regular access to technical and professional information, communication network and expert information are examples of information sourcing opportunities (Taylor et al., 2002).*
Knowledge Sharing Process	An organization needs to make tacit knowledge explicit and keep it updated and accessible. Tacit knowledge must be shared and made explicit (formalized) in order to have a significant value to an organization. Only formalized knowledge can be represented electronically, be stored, shared, and effectively applied (Beckman, 1999).

4.0 SAMPLING AND DATA COLLECTION METHOD

Data was collected through a self-administered and mailed questionnaire approach. The questionnaire was designed and developed based on the exploratory interviews, literature review and previously tested and validated measurable variables from previous empirical studies conducted by Taylor, et al. (2002); Taylor (2004) and Syed-Ikhsan and Rowland (2004a). Pre-testing and pilot testing of the questionnaires were undertaken and some revisions were made prior to the full administration of data collection.

5.0 RESULTS AND DISCUSSION

5.1 Demographic Profile of Respondents

All accountants employed by this accounting specialist department of Malaysia's Federal Government are sampled as they are primarily responsible for the accounting knowledge, accounting processes, computerised accounting system and preparation of financial reports. They are also engaged in the operational and strategic decision making process. Thus, their opinions to the issues raised in the questionnaires can give a high level of credibility and can have long term consequences for the future success of KM implementation in the selected accounting organization.

An authorized list of accountants' names with their present job position and department were obtained from the accounting specialist department of Federal Government in Malaysia. This authorized name list was used as a checklist when distributing the questionnaire to all accountants employed by this case study organization.

Out of the 365 questionnaires distributed, 203 respondents (56% response rate) returned the completed questionnaires. Respondents ranged in age from the early 24's to over 50 years old. About 60% of the respondents were between the ages of 24 and 37 years old and the balance of 40% were between 38 and 55 years old. About 57% of the respondents were female and 43% were male accountants. On average, respondents had been in this case study organization ten years. The majority

(56%) of the respondents was junior accountants and the remaining respondents (44%) were members of senior accountants (30%) and top management level (14%). Only 35% of the respondents were given the opportunity to attend KM related seminars and conferences to enhance their awareness and understanding of KM.

5.2 Validity and Reliability Tests For Study Variables

Using the Likert like scale of seven points, the overall 26 items of survey instrument used in this study has a reliability coefficient of 0.937. Therefore, a Cronbach alpha of 0.937 for the tested survey instrument is an authoritative source to justify that the study variables and measures in the questionnaires were reliable. A further reliability test on each factor loading extracted using factor analysis was also performed to ensure the items measuring conceptual variables hang together as a set with preferred values for Cronbach alpha greater than 0.70 (Pallant, 2001).

The results of Factor Analysis for this study show Kaiser-Meyer-Olkin (KMO) value was 0.881 and Bartlett's test of sphericity was large and significant (p-value < 0.05). Factor Analysis had extracted five (5) factors to explain 68.633 percent of the total variance of the entire set of data. Five (5) factors were chosen because they had eigenvalues greater than 1.0 which is greater than the variance contributed by any one variable. On the basis of the factor loadings, all the extracted factors are identified and named accordingly in conformity to the survey literature. Cronbach alpha was used to test the internal consistency on the factors extracted and all the extracted factors that have reliability values greater than the recommended level of 0.70 (Pallant, 2001, Hair, Anderson,, Tatham & Black, 1998) were retained for hypothesis testing. As a result of Factor Analysis, the two hypotheses from the original conceptual framework i.e. 1) learning opportunities and 2) information sourcing opportunities were dropped due to poor loading of less than 0.40 and due to single item within a factor.

Based on the information above, the following Table 2 shows the summarised results of Factor Analysis and Reliability Test for the goodness of measures of all the study variables used in this study.

5.3 Hypothesis Testing and Discussion of Results

Factor Analysis was used to confirm that only four (4) out of six (6) learning related variables are valid and are in conformity to the literature review and empirical evidences. Pearson Correlation test and multiple regression model were then used to explore the positive significant relationships between independent variables and dependent variable as well as to identify the significant learning factors that could contribute to the sharing performance of tacit knowledge.

Table 2: Factor Analysis and Reliability Test (Summarized Results)

Factors	Items	Factor Loadings	Eigen value	% of Variance Explained	Cumulative % of Variance Explained
Training and Learning Opportunities	10	0.77 - 0.54	9.922	38.162	38.162
Sharing Performance of Tacit Knowledge	6	0.86 - 0.75	2.972	11.432	49.594
Job Rotation	3	0.95 - 0.91	2.135	8.210	57.804
ICT Skills and know-how	3	0.85 - 0.66	1.564	6.015	63.820
Performance Evaluation and Incentives	2	0.77 - 0.71	1.251	4.813	68.633

A correlation matrix of all the study variables shows that all study variables are positively and significantly correlated on each other. The preliminary test of multicollinearity indicates that correlation coefficients are within the acceptable limit. In this study, the tolerance values or VIF values for all the independent variables in the multiple regression model were above the cut-off criterion i.e. the tolerance values should be more than 0.2 (1/VIF = 1/5) or VIF values lesser than 5 (Field, 2000). Therefore, it can be safely concluded that there is no collinearity within the data and multicollinearity is absent in the multiple regression model used in this study.

The results obtained from the Factor Analysis and Correlations test were further analyzed for hypothesis testing using Multiple Regression Analysis. The result obtained from the Standard Multiple Regression Analysis is shown in Table 3. The value of the R-Square of 0.319 from the Multiple Regression Model indicates that about 32% of the variance in the sharing performance of tacit knowledge can be explained by four (4) independent variables of this study. Training and Learning Opportunities is the highly significant learning factor at 1% significant level and followed by both 1) performance evaluation and incentives and 2) ICT skills & know-how which are moderately significant at 5% significant level in their contribution to the prediction on the sharing process performance of tacit knowledge. Thus, this multiple regression model supports three

hypotheses and fails to support hypothesis testing on the positive and significant relationship between job rotation and the sharing performance of tacit knowledge.

Table 3: Multiple Regression Model

Relationship between Learning Factors of Professional Intellects and Sharing Process of Tacit Knowledge	
Standard Multiple Regression Result	**R^2 = 0.319** F = 23.138 **Sig. = 0.000*** **
KM Enablers	**B = Beta Coefficient** **P = P-Value**
Training & Learning Opportunities	B = 0.374 **p = 0.000*** **
Job Rotation	B = - 0.024 p = 0.699
Performance Evaluation & Incentives	B = 0.149 **p = 0.043****
ICT Skills and Know-How	B = 0.146 **p = 0.040****
Note: Supported hypotheses in boldface type: ***p < 0.01, **p < 0.05, * p <0.1	

Based on the significant relationship from the regression results in Table 3, it is clearly evidenced that training and learning opportunities provided to public sector accountants can make the greater contribution to help improving the sharing process of tacit knowledge. Knowledge gained by the professional intellects through internal and external training courses, feedback on performance evaluation, life long learning opportunities as well as having access to information resources and people networking can enable them to share and translate their knowledge into the organization's routines, core competencies, business process, strategies and culture (Holsapple and Singh, 2003).

Performance evaluation and incentives together with ICT skills and know - how are the moderately significant learning variables which seemed critical to tacit knowledge performance. Accountants as professional intellects need performance evaluation and incentives to maintain their status as experts (Shapero, 1985 and Taylor et al.,2002). In fact, a culture of feedback on performance evaluation by superiors is an effective leveraging of professional intellects (Quinn et al., 1996). Promotional and reward systems should also be based on their ICT skills and ability to transfer and share personal experiences and innovative ideas with others.

6.0 CONCLUSIONS

This study provides the empirical evidence in identifying the key learning factors of public sector accountants that can have an impact on the sharing performance of tacit knowledge in the public sector accounting organization. Since the main task of the case study organization is heavily related to accounting process and technology to improve its data integrity and organizational performance, the results of this research can enhance the importance of those identified key learning factors of accountants in the sharing process of tacit knowledge to improve the value of explicit accounting knowledge assets. This selected accounting organization has to give more emphasis on those significant and non-significant learning factors of its professional intellects as being identified by this study in drawing up its future KM implementation strategy.

However, the results of this study may not be generalizable to other public sector accountants who are working in other government's accounting organizations such as state government, local government and statutory bodies because this survey research was limited to public sector accountants working in the accounting specialist department of the Malaysia's federal government only.

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