Developing Intellectual Asset by Knowledge Sharing

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Abstract

The study seeks to determine the motivational factors that influence knowledge sharing, identify the obstacles to knowledge sharing, determine the nature of relationship between structural capital and human capital, and ascertain the extent of sharing knowledge in public sector organizations.

The study was carried out primarily through the survey method and interview of employees in three public sector organizations in Nigeria.

Secondary data were obtained through books, journals, and internet. Findings indicate that reciprocal benefits, recognition, information and communication technology and joy in helping others are the motivational factors that influence knowledge sharing: fear of criticism, lack of incentives, organisation culture, inappropriate decision making and operational structure are the obstacles for knowledge sharing; there is a significant relationship between structural capital and human capital;

the extent of sharing knowledge in public sector organisations is high.

Knowledge sharing as a concept is essential and provides several business opportunities. It is necessary for creating a new knowledge in order to achieve competitive advantage. It is an engine that transforms knowledge into business value. However, implementation of knowledge sharing is not easy. Organisations have to condone various issues and challenges, such as organization culture, strategy, information technology, knowledge organization, etc. Despite these challenges, organizations have shown interest in knowledge sharing.

Keywords: Intellectual Asset, Structural Capital, Tacit Knowledge, Explicit Knowledge and knowledge Sharing

1. Introduction

The concept of knowledge management has gained momentum in recent years due to globalization of economies, rapid growth in information technology, increase in knowledge based work and competitive pressure. Knowledge sharing is a systematic process of creating, acquiring, synthesizing, learning, sharing, and using knowledge and experience to achieve organizational goal (www.indianmba.com). Knowledge sharing is an activity by which knowledge is exchanged among people. Organisations have recognized that knowledge constitutes a valuable intangible asset for creating and sustaining competitive advantages. Knowledge sharing activities are generally supported by knowledge management systems. The sharing of knowledge constitutes a major challenge in the field of knowledge management because some employees tend to resist sharing their knowledge with the rest of the organisations

Knowledge sharing enables employees to share their insights and experiences in order to allow faster and more cost effective project completions (Geraint, 1998). Before knowledge can be shared or created, the need for knowledge has to be identified. Employees can draw upon the experiences of others in their pursuit of finding solutions to problems. Needs for knowledge arise when starting work in a new field, for example, when starting to use a new tool,

technique or technology. These needs are brought out when improving current work practices by implementing a new component and when changing the area of work (Kueza, 2001).

Many organizations are reasonably good at acquiring knowledge but this resource is lost by not effectively disseminating it (Ezigbo, 2007).

Recent studies report that knowledge sharing is usually the weakest link in knowledge management. How do organizations share knowledge? Many corporate executives believe that training is the main element of knowledge management. Formal training is useful, but most knowledge sharing occurs through communication processes that quickly and fluidly share meaningful information across organization boundaries.

Teams also play an important role in knowledge sharing. Organisations disseminate knowledge by seeding teams with new members who bring valuable experience from successful teams in the past. Of course, many employees are reluctant to share knowledge, fearing that they will lose power. Reward systems potentially reduce this problem (McShane and Glinow, 2000).

1.1 Objectives

The study has the following specific objectives

- To determine the motivational factors that influence knowledge sharing
- To identify the obstacles to knowledge sharing
- To determine the nature of relationship between structural capital and human capital
- To ascertain the extent of sharing knowledge in public sector organisations

1.2 Hypotheses

The study proposes the following hypotheses

H_1 Reciprocal benefits, recognition, ICT, and joy in helping others are the motivational factors that influence knowledge sharing

H_2 Fear of criticism, lack of incentives, Organisation culture, inappropriate decision making and operational structure are the obstacles to knowledge sharing.

H_3 There is a significant relationship between structural capital and human capital

H_4 The extent of sharing knowledge in public sector organizations is high.

1.3 Methodology

The study was carried out primarily through the survey method and interview of employees in three public sector organizations in Nigeria.

Secondary data were obtained through books, journals, and internet. A sample size of 286 was obtained from the population of 1000 at 5% error tolerance and 95% degree of freedom using yamane's statistical formular. 275(96.15%) of the questionnaire distributed were returned while 11 (3.85%) of the questionnaire distributed were not returned. The questionnaire was designed in likert scale format. The researcher conducted a pre-test on the questionnaire to ensure the validity of the instrument. Data collected were presented in frequency tables. Correlation Coefficient and Chi-Square statistical tools were used to test the hypotheses.

2. Literature Review

2.1 Types of Knowledge

Embrained knowledge is that which is dependent on conceptual skills and cognitive abilities. This could be considered as practical, high-level knowledge, where objectives are met through perpetual recognition. Tacit knowledge may also be embrained, even though it is mainly subconscious.

Embodied Knowledge is action oriented and consists of contextual practices. It is more of a social acquisition as how individuals interact in and interpret their environment, creates this non- explicit type of knowledge.

Encultured Knowledge is the process of achieving shared understandings through socialization and acculturation. Language and negotiation become the discourse of this type of knowledge in an organization.

Embedded Knowledge is tacit and resides within systematic routines. It relates to the relationships between roles, technologies, formal procedures and emergent routines within a complex system.

Encoded Knowledge is information that is conveyed in signs and symbols (books, manuals, data bases, etc.) and decontextualized into codes of practice. Rather than being a specific type of knowledge, it deals more with the transmission, storage and interrogation of knowledge (Blacker, 1995).

2.2 Tacit Knowledge

Tacit knowledge is the kind of knowledge that is difficult to transfer to another by means of writing it down or verbalizing it. Effective transfer of tacit knowledge generally requires extensive personal contact, regular interaction and trust. Tacit knowledge is not easily shared. It consists of beliefs, ideas, values, mental models which are deeply ingrained in us and which we often take for granted.

Tacit knowledge refers to a knowledge possessed by an individual which is difficult to communicate to others through words and symbols. Tacit knowledge can be acquired by observation, imitation, and practice. The key to acquire tacit knowledge is experience. It is extremely difficult for people to share each other's thinking processes. Tacit knowledge has been described as "know how" as opposed to "know what". Tacit knowledge is intuitive and unarticulated knowledge which cannot be communicated, understood or used without the knowing subject. Transfer of tacit knowledge requires close interaction and the building of shared understanding and trust among them (http://en.wikipedia.org/wiki/Tacit-knowledge).

2.3 Explicit Knowledge

Explicit knowledge is knowledge that has been codified, articulated and stored in certain media. It can be readily transmitted to others. Information contained in encyclopedia and in Wikipedia are examples of explicit knowledge. Explicit knowledge can be easily codified, and easily transferred without the knowing subject (http://en.wikipedia.org/wiki/Explicitknowledge).

2.4 Intellectual Capital
Intellectual capital is the knowledge that resides in an organization which include human, structural, and customer capital (Ezigbo, 2011). Measuring the real value and the total performance of intellectual capital's components is essential for any corporate head who knows how high the stakes have become for corporate

survival in the knowledge economy and information age (Khavandkar et al 2009). Intellectual capital is classified as follows:

2.4.1 Human Capital: This is the knowledge that employees possess and generate, including their skills, experience and creativity. Human capital can also be seen as the value that the employees provide through the application of skills, know- how and expertise. Human capital is an organisation's combined human capability for solving business problems. Human capital is inherent in people and cannot be owned by an organization. Thus, human capital can leave an organization. Human capital encompasses how effectively an organization uses its human resources as measured by creativity and innovation (Maddocks and Beaney 2002).

2.4.2 Structural Capital: This is the knowledge captured and retained in an organisation's systems and structures. Structural capital refers to the supportive infrastructure, processes, and databases of the organization that enable human capital to function. Structural capital includes buildings, hardware, software processes, patents, trademarks, organisation's image, information system, and proprietary databases. Organisation capital includes the organization philosophy and systems for leveraging the organisation's capability. Process capital includes the techniques, procedures and programmes that implement and enhance the delivery of goods and services. Innovation capital includes intellectual properties and intangible assets (Maddocks and Beaney, 2002). Intellectual properties are protected commercial rights such as copy rights and trademarks. Intangible assets are all of the other talents and theory by which an organization is run Edvinsson and Malone, 1997).

2.4.3 Customer Capital: This is the value derived from satisfied customers, reliable suppliers, and other external sources that provide added value for the organization. An organisation's knowledge: Its intellectual capital is its main source of competitive advantage.

2.5 Obstacles to Knowledge Sharing
The view of knowledge as power hinders the sharing of knowledge in organization. People do not like to share their best ideas because doing so dilutes their standing in the organization, and can impede their ability to get ahead (Bender and Fish, 2000; Greengard, 1998a; Martensson, 2000, and Miller, 2002).
By using other people's knowledge, employees may feel that they look less knowledgeable, and that they are dependent on others to do their job (Greengard, 1998a).
Job security concerns as obstacle to knowledge sharing are further exacerbated when an organization is experiencing lay-offs.
Employees are unwilling to share mistakes and failures, despite the fact that this knowledge could prevent other employees from making the same errors, and therefore save the company money and time. They may not want to share positive knowledge, as they believe their job security is inextricably linked to their personal knowledge and expertise (Davenport et al, 1998).
People also like to consider themselves as experts, and would prefer not to collaborate with others (Bender and Fish, 2000; Greengard, 1998).
When there is unhealthy competition and rivalry among organizational units, people may not be willing to share with other units (Arora, 2002).

The unwillingness on the part of some employees to share their knowledge may also be a question of trust. People are reluctant to share knowledge when they do not know other employees well enough personally to evaluate their trustworthiness (Gorman, 2002).

A lack of incentives is an obstacle to knowledge sharing, as people are reluctant to share without recompense either in the short or in the long term (Davenport, 1997).

Soo, et al (2002), agree that a lack of incentives is an obstacle to knowledge sharing. Not only incentives, but the right type of them is very important. Incentives based on individual performance, as opposed to team performance, do not foster knowledge sharing (Arora, 2002 and Soo, et al, 2002).

An important issue is the fact that sharing knowledge is cultural. If the organizational culture generates a habit of hoarding knowledge rather than sharing it, most likely, employees will not share their knowledge (Arora, 2002).

Another obstacle to knowledge sharing is the issue of time. Employees are willing to share knowledge, however, if the organization does not make knowledge sharing a priority, and the time to share knowledge is not built into the employees' daily work life, most likely they will not share their knowledge (Miller, 2002, Soo, et al, 2002).

The biggest challenge is how to change mindset of people from believing that "knowledge is power" to believing that "knowledge sharing is power". Such change of mindset is not easy to establish, it requires constant training and development of human resources of the organizations. Other barriers to knowledge sharing include, fear of criticism, lack of understanding of benefits of knowledge sharing, psychological fear of information technology, inappropriate decision making and operational structure (www.indianmba.com).

2.6 Knowledge Sharing Strategies

Strategies that organizations can employ to promote knowledge sharing in the third world countries: Organisational efforts should be focused on creating opportunities for employees to interact, whether formally or informally to foster knowledge sharing in the third world countries.

Appropriate rewards, recognition, and compensation to drive knowledge management are essential (Greengard, 1998). The incentives provided to employees should be short term e.g bonuses and long term, e.g salaries, promotions, etc.

Knowledge management skills including knowledge sharing should form part of employees' performance evaluation. Employees can be assessed based on the acquisition of new skills and knowledge, undertaking new projects or responsibilities, contributions to the development of another employee (Brelade, and Harman, 2000),

Recruiting and selecting employees that fit well with the knowledge sharing culture fosters knowledge sharing (Hislop, 2003).

The organization can use tools such as personality and aptitude tests to determine how well those recruited would fit in with the organization. They should also be evaluated on their propensity to share knowledge (Remirez, 2007).

Employees should be trained how to use the knowledge management systems, as well as educated with respect to the value of sharing knowledge. Organisations have to assist employees in understanding what the system is, what it does, and how it can benefit them personally (Greengard, 1998a).

Management has to motivate the employees to share their knowledge, and can do so by ensuring staff

are allocated sufficient time for knowledge sharing;

are recognized and rewarded for sharing;

are hired and promoted in part based on knowledge sharing;

are provided with sufficient time to train on how to use knowledge management systems;   know how to discern and exhibit knowledge sharing behaviours; and

understand the value of knowledge sharing not only to the organization, but to them as well (Remirez,2007).

Organisations need to make it quick and easy to share knowledge. Management should identify knowledge sharing as a priority, and allow employees sufficient time to share knowledge (Miller, 2002).

Finally, one of the most important conditions under which people are willing to share their knowledge is visible support of senior management. Senior Management should also be seen as committed to knowledge sharing efforts and role model this behaviour (Goman, 2002).

Another obstacle to knowledge sharing is lack of open communication. Management should create an environment where open communication is encouraged, and should take the time to explain to the employees the value of sharing knowledge (Goman, 2002).

2.7 Benefits of Knowledge Sharing

These are benefits from knowledge sharing, knowledge sharing

forster innovation by encouraging free flow of ideas,

help in understanding markets and customers,

help develop   products and services,

build competencies,

improve customer service by streamlining response time,

boost revenues by getting products and services to market faster,

enhance employee retention rates by recognizing the value of employee's knowledge and rewarding them for it, and

streamline operations and reduce cost by eliminating redundant or unnecessary processes (www.indianmba.com).

2.8 Result and Discussion

This section presents the analysis of data collected in the course of this study. Data were presented in tables for analysis. Hypotheses 1, 2, and 4 were tested by chi- square test statistics, hypothesis 1 was tested by correlation coefficient using SPSS.

Table (1): What are the Motivational Factors that Influence Knowledge Sharing

S/N		AGREEMENT	DISAGREEMENT	TOTAL
1	Reciprocal benefits	270	5	275
2	Recognition	265	10	275
3	Information and communication Technology	200	75	275
4	Joy in helping others	180	95	275
Total		915	185	1100

Source: Field Survey, 2012.

H_1: Reciprocal benefits, recognition, information and communication technology and joy in helping others are the motivational factors that influence knowledge sharing

Table (2)   Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	744.035(a)	6	.000
Likelihood Ratio	692.209	6	.000
Linear-by-Linear Association	414.264	1	.000
N of Valid Cases	1100		

Source: SPSS Version 15.00..

Table (2) is the output of the computed Chi-Square values from the cross tabulation statistics of observed and expected frequencies. With the response options of agree and disagree based on the responses of the research subjects from the three public sector organizations; Pearson Chi-Square computed value (X^2_c= 744.035) is greater than the Chi –Square tabulated value (X^2_t=12.59) with 6 degrees of freedom (df) at 0.05 level of alpha (X^2_c=744.035, p,< .05)

Decision Rule

The decision rule is to accept the alternate hypothesis if the computed Chi- Square value is greater than   tabulated Chi-Square value otherwise reject the alternate   hypothesis and accept the null hypothesis.

Result of Testing Hypothesis (1)

Since the Pearson Chi- Square computed X^2_c= 744.035 is greater than Chi-Square table value X^2_t =12.59, the null hypothesis is rejected and alternate hypothesis is accepted. Thus, we conclude that reciprocal benefits, recognition, information and communication technology and joy in helping others are the motivational factors that influence knowledge sharing.

Table (3) What are the Obstacles to Knowledge Sharing

S/N		AGREEMENT	DISAGREEMENT	TOTAL
1	Fear of criticism	200	75	275
2	Lack of incentives	250	25	275
3	Organisation culture	274	01	275
4	Inappropriate decision making and operational structure	260	15	275
Total		984	116	1100

Source: Field Survey, 2012.

H_2 fear of criticism, lack of incentives, organisation culture, inappropriate decision making and operational structure are the obstacles to knowledge sharing

Table (4) Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	563.923(a)	6	.000
Likelihood Ratio	619.876	6	.000
Linear-by-Linear Association	268.039	1	.000
N of Valid Cases	1100		

Source: SPSS Version 15.00.

Table (4) is the output of the computed Chi-Square values from the cross tabulation statistics of observed and expected frequencies. With the response options of agree and disagree based on the responses of the research subjects from the three public sector organizations. Pearson Chi-Square computed value (X^2_c= 563.923) is greater than the Chi –Square tabulated value (X^2_t =12.59) with 6 degrees of freedom (df) at 0.05 level of alpha (X^2_c 563.923, p,< .05)

Decision Rule

The decision rule is to accept the alternate hypothesis if the computed Chi- Square value is greater than tabulated Chi-Square value otherwise reject the alternate hypothesis and accept the null hypothesis.

Result of testing Hypothesis (2)

Since the Pearson Chi- Square computed X^2_c= 563.923 is greater than Chi- Square table value X^2_t =12.59, the null hypothesis is rejected and alternate hypothesis is accepted. Thus, we conclude that fear of criticism, lack of incentives, organisation culture, inappropriate decision making and operational structure are the obstacles for knowledge sharing.

Table (5): What is the Nature of Relationship between Structural Capital and Human Capital

S/N		AGREEMENT	DISAGREEMENT	TOTAL
1	There is a significant relationship between structural capital and human capital	270	05	275
2	There is no significant relationship between structural capital and human capital	25	250	275
Total		295	255	550

Source: Field Survey, 2012.

H_3: There is a significant relationship between structural capital and human capital

Table (6) Descriptive Statistics

	Mean	Std. Deviation	N
Structural Capital	1.6873	.88603	275
Human Capital	1.6582	.86680	275

Table (7) Correlations

		structural capital	human capital
Structural Capital	Pearson Correlation	1	.568(**)
	Sig. (2-tailed)		.000
	N	275	275
Human Capital	Pearson Correlation	.568(**)	1
	Sig. (2-tailed)	.000	
	N	275	275

. Source: SPSS Version 15.00.

Table (6) shows the descriptive statistics of the structural capital and human capital. With a mean response of 1.6873 and std. deviation of .88603 for structural capital and a mean response of 1.6582 and std. deviation of .86680 for human capital and the number of respondents (275); by careful observation of standard deviation values, there is not much difference in terms of the standard deviation scores. This implies that there is about the same variability of data points between the dependent and independent variables.

Result of Testing Hypothesis (3)

Table (7) is the Pearson correlation coefficient for structural capital and human capital. The correlation coefficient shows 0.568. This value indicates that correlation is significant at 0.05 level (2tailed) and implies that there is a significant relationship between structural capital and human capital (r = .568). The computed correlations coefficient is greater than the table value of r = .195 with 273 degrees of freedom (df. = n-2) at alpha level for a two-tailed test (r = .568, p< .05). However, since the computed r = .568, is greater than the table value of .195 we reject the null hypothesis and accept the alternate hypothesis which states that there is a significant relationship between structural capital and human capital (r =.568, P<.05).

Table (8)   What is the Extent of Sharing Knowledge in Public Sector Organisations

S/N		AGREEMENT	DISAGREEMENT	TOTAL
1	The extent of sharing knowledge in public sector organisations is high	250	25	275
2	The extent of sharing knowledge in public sector organisations is not high.	100	175	275
Total		350	200	550

Source: Field Survey, 2012.

H_4 The extent of sharing knowledge in public sector organisations is high

Table (9) Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	342.024(a)	6	.000
Likelihood Ratio	380.259	6	.000
Linear-by-Linear Association	167.344	1	.000
N of Valid Cases	550		

. Source: SPSS Version 15.00.

Table (9) is the output of the computed Chi-Square values from the cross tabulation statistics of observed and expected frequencies. With the response options of agree and disagree based on the responses of the research subjects from the three public sector organizations; Pearson Chi-Square computed value (X^2_c= 342.024) is greater than the Chi –Square tabulated value (X^2_t =12.59) with 6 degrees of freedom (df) at 0.05 level of alpha (X^2_c 342.024, p,< .05)

Decision Rule

The decision rule is to accept the alternate hypothesis if the computed Chi- Square value is greater than the tabulated Chi-Square value otherwise reject the alternate hypothesis and accept the null hypothesis.

Result of testing Hypothesis (4)

Since the Pearson Chi-Square computed X^2_c= 342.024 is greater than Chi- Square table value X^2_t =12.59, the null hypothesis is rejected and alternate hypothesis is accepted. Thus, we conclude that the extent of sharing knowledge in public sector organisations is high.

2.9 Concluding Remarks

Knowledge sharing as a concept is essential and provides several business opportunities. It is necessary for creating a new knowledge in order to achieve competitive advantage. It is an engine that transforms knowledge into business value. However, implementation of knowledge sharing is not easy. Organisations have to condone various issues and challenges, such as organization culture, strategy, information technology, knowledge organization, etc. Despite these challenges, organizations have shown interest in knowledge sharing.

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