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**Business Administration and Business Economics**

**Does Tacit Knowledge Predict Organizational Performance? A  
Scrutiny of Firms in the Upstream Sector in Nigeria**

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**Abstract:** This paper examined tacit knowledge so as to see whether tacit knowledge when properly put to use can lead to improved performance by upstream sector firms in Nigeria. Knowledge as we believe, is very vital to both corporate entities and individuals. Knowledge encompasses both explicit and tacit. This paper focused on one aspect of knowledge – ‘tacit’ which is in the psyche or brain of the individual possessing it. In spite of the central role it plays, tacit knowledge has been downplayed by most firms. However, we adopted a survey research design via questionnaires administered to 504 employees randomly selected from 3 different oil firms. The data obtained were analyzed using inferential statistics. Also, multi-collinearity diagnoses of tacit knowledge and organizational performance was performed. The result suggests that tacit knowledge is linearly correlated with organizational performance. This implies that tacit knowledge predicts organizational performance. This study is significant in that the findings would be useful to management of firms, as it divulge how tacit knowledge when properly harnessed can lead to increased performance. Most prior studies in this area were conducted in other countries, hence our study is one of the first in Nigeria that examined tacit knowledge and organizational performance.

**Keywords:** Knowledge Management; Explicit Knowledge; Human Capital; Profitability; Oil Industry

**JEL Classification:** M1

## **1. Introduction**

Knowledge is the most important factor in economic life” (Stewart, 1997). An organization’s competitive advantage depends more than anything on its knowledge, or to be slightly more specific, on what it knows, how it uses what it knows, and how fast it can know something new (Prusack, 1997). Knowledge of varying degrees has obviously always had some part to play in organizational performance from time immemorial; the new claim is that under current conditions, knowledge has come to assume the prime role among the various factors of production (such as Land, Labour, Physical resources and Capital) and that these

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other factors have been eclipsed in their significance by the power of knowledge and its criticality. Knowledge is made up of both explicit and tacit components. This paper focused on one of the components of knowledge – ‘Tacit Knowledge’.

In the field of knowledge management, the concept of tacit knowledge refers to a knowledge which is only known by an individual and that is a culture and is difficult to share with people not embedded in that culture. It is that knowledge people carry in their minds and is therefore pretty difficult to access. Often people are not aware or conscious of the knowledge they possess or how it can be valuable to others. Tacit knowledge is not easily shared and it is considered more valuable because it provides context for people, places, ideas and experience. Effective transfer of tacit knowledge generally requires extensive personal contact and trust.

Tacit knowledge consists often of habits and culture that we do not recognize in us. In order for organizations to gain competitive advantage, enhance performance, tacit knowledge is considered imperative in the business milieu (Koontz et al, 1980). A thorough understanding of the environment and its competitive forces is essential if managers must attain their set objectives in an organization. In this context, tacit knowledge is sine qua non for organization that wants to increase performance. This study is significant to the extent that the information gathered during the course of the study would be useful to organizations, as it divulge how tacit knowledge when properly harnessed can enhance the performance of firms. This study is unique in that most prior studies in this area were conducted in other countries<sup>1</sup> while there are no empirical evidence in Nigeria. Hence, our study is one of the first in Nigeria that examined tacit knowledge and organizational performance.

## 2. Conceptual Framework

The oil industry is one sector where huge sums of money is spent on training and re-training of staff for the purpose of ensuring their relevance in these days of technological changes. The training could be of short duration in the form of seminars or workshops or long term say three to six months or even a year and above but a lot is learnt on the part of such an employee undergoing the programme. The knowledge so acquired is used for the benefit of the organisation before he eventually dies or retires. When the employee retires or leaves, he retires or leaves with this knowledge. His colleagues only have access to that aspect of the employee’s knowledge, which he voluntarily offers. He retires with those aspects of his knowledge, which he refused to make known to his colleagues while he was

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<sup>1</sup> See (Megan, et.al, 2007; Rohana & Kamaruzaman, 2009; Kiku & Lori, 2009; Orzea, 2009; Hesham & Salah, 2010; Wen-Bing, 2011; Rasula, Vuksic & Stemberger, 2012; Ebrahim, et.al, 2012; Hamidreza & Amirreza, 2012; Nowshade & Elias, 2013)

in active service. The organization is deprived of the use of such knowledge which it helped the employee to acquire through sponsoring him in seminars, workshops and even in acquiring a University education. For the organization, this is somehow a failed investment.

Blake (1998) as cited in Armstrong (2001), articulates that the idea of knowledge management is to encapsulate a firm's shared expertise and distribute it to whenever it can achieve the largest payoff. The above view is in agreement with the resource-based view of the firm which as argued by Grant (1991) propose that the source of competitive advantage lies in its people and the knowledge they carry and not in how it positions itself in the marketplace. Trusler (1998) remarks that the competence to collect, handle and use knowledge in the most successful way turn out to be a foremost source of competitive advantage in most leading firms in the oil industry. A successful company is one that is able to create new knowledge, although, knowledge creation does not lead directly to competitive advantage, it is intervened via novelty. Novelty or innovation means "new". Knowledge creation is, therefore, closely linked to novelty.

Organizational performance is connected to increased profitability, service delivery or getting hold of the most excellent results in essential areas of organizational activities. Little has been done to unchain the "black box" of the processes that connect tacit knowledge with organizational performance. This view is supported by Legge (2001) when she opined that "an issue on which there appears to be a broad measure of harmony is the need to open up the 'black box' of the processes that connect tacit knowledge with organizational performance. As noted by Nonaka and Takeuchi (1995), transferring knowledge from one member of an organization to another begins by the first member converting tacit knowledge (intuitions, silent mental models and personified technical skills) into explicit knowledge (a meaningful set of information expressed in lucid language including numbers or diagrams). This explicit knowledge can then be passed on to another member of the organization – who must convert it into tacit knowledge (internalization) before he or she may use it. As a result of the continually dwindling business environment coupled with the pressure for growth and survival being faced by corporate organizations, there is an urgent need for companies to move towards a knowledge-driven business model. In this context, the contemporary company is organized for constant change. It is the nature of knowledge that changes fast such that today's certainties become tomorrow's absurdities (Yomere, 2003).

### **3. Methodology**

This study examines tacit knowledge and organizational performance in the upstream sector in Nigeria.

#### **3.1 Method of Analysis**

This study adopted a survey research design by means of questionnaire. The preference of the design is for the reason that the researcher is concerned in scrutinizing what is happening to sample subjects or variables without any attempt to maneuver or control them. The population is restricted to three out of the “Big Six” in the upstream sector in Nigeria: Shell, Chevron and Texaco. The study draws a sample size of five hundred and four (504) staff only which is from the entire population of two thousand four hundred and seventy four (2474). This is about 20.37% of the population. Also looking at the percentage of total staff, we have Shell 30.40%, Chevron 53.92% and Texaco 15.68%. These figures surpass 10% in each case and by implication, permissible. The above is justified by prior studies conducted by Fisher (1964), Kemp and Reid (1972), Owojori (2002) as cited in Oboreh (2008) which suggested that for a scientific research of this scenery, ten percent (10%) sample size is deemed sufficient.

#### **3.2 Data Definition and Source**

The questionnaire was the main instrument of data collection. The questionnaire titled “Tacit Knowledge Management Scale (TKMS) and Organizational Performance Scale (OPS) were constructed by the researcher. This questionnaire measured respondent’s knowledge on tacit knowledge and organizational performance. This self-constructed research instrument consists of two main sections: socio demographic information and questions relating to tacit knowledge and organizational performance. Organizational performance and tacit knowledge scale were also included in this section. Organizational performance scales have 17 items and tacit knowledge scale have 11 items. The questionnaire is based on Likert-type scale with five (5) response categorization, namely: Strongly Agree (SA), Agree (A) Disagree (DA), Strongly Disagree (SD) and Undecided (UD). The option of the items are weighed on Likert format with SA= 4, A= 3, DA= 2, SD =1 and UD =0. The reverse however will be the case for negative items on each scale. Items in the questionnaire were tested for their internal consistency. This was done through Cronbach Alpha. The computed cronbach alpha obtained is  $r=0.870$ ,  $p < 0.05$ . This matrix is an indication that the items in the instrument have good reliability for this study.

The validity of the instrument on tacit knowledge and organizational performance scales were determined by experts in the Department of Business Administration. The items were found to be related to each of the variables of interest in the study. The data so collected were analysed using inferential statistics (correlation and simple regression). Also included in the analysis, is the multi-collinearity diagnoses of tacit knowledge and organizational performance.

#### 4. Results and Discussion

This section presents the results of analysis of data in this study. The data collected from the response of 504 subjects were collated and analyzed on the basis of the independent as well as the dependent variable used in the study. The data obtained were analyzed in order of precedence. First, we presented the correlation results of tacit knowledge and organizational performance, which was closely followed by the simple regression. The multi-collinearity diagnosis test concludes this section. The data obtained were presented in tables 1-3.

**Table 1. Correlation Analysis of Tacit Knowledge and Organizational Performance**

Model I	Unstandardized Coefficient	Standard Error	Standardized Coefficient Beta	t	Sig.
Constant	15.324	2.160		7.093	.000
Predictor	.715	0.060	.470	11.906	.000

Source: SPSS Output, 2015

From table 1 above, the significant “constant t-value (7.093,  $p < 0.01$ ) showed that there are some other potent variables which were not included in the study. The Beta weight for tacit knowledge variable was found significant, Beta = 0.470,  $t = 11.906$ ,  $p < 0.01$ .

**Table 2. Regression Analysis of Tacit Knowledge and Organizational Performance**

Model	R	R <sup>2</sup>	R <sup>2</sup> Adjusted	Standard Error of the Estimate
Tacit Knowledge	.470	.221	.220	5.4391

  

ANOVA					
Model I	Sum of Squares	Mean Squares	df	F	Sig.
Regression	4193.688	4193.988	1	141.756	.000
Residual	14762.364	29.584	499		
Total	18956.052		500		

Source: SPSS Output, 2015

The result in table 2 showed an R<sup>2</sup> adjusted value of .470 which revealed that there is a positive linear relationship between tacit knowledge and organizational

performance. The computed  $F(1, 499) = 141.756$   $p < 0.01$  is an indication that there is a significant relationship between tacit knowledge and organizational performance. The conclusion drawn is that tacit knowledge is linearly correlated with organizational performance. The  $R^2$  adjusted value of .220 showed that 22% of the variation in organization performance was accounted for by tacit knowledge. This is the effect size of the antecedent variable (tacit knowledge) on the criterion variable (organizational performance). In other words a unit change in the standard deviation of the measure of tacit knowledge will account for about 22% change in organizational performance. The standard error of the estimate having a moderate value of 5.4391 is an indication that the  $r$  values are quite appropriate values for the measurement of the relationship between the variables of the study. In order to confirm or certify that no spurious relationship between the variables under investigation, the multi-collinearity diagnosis was carried out and is as presented in table 3.

**Table 3. Multi-Collinearity Diagnosis of Tacit Knowledge and Organizational Performance**

Model	Zero-order	Partial	Part	Colinearity Statistics	
				Tolerance	VIF
Predictor	.470	.470	.470	1.000	1.000

*Source: SPSS Output, 2015*

The zero order co-efficient of .470 is an indication of the correlation between tacit knowledge and organizational performance. The partial correlation co-efficient of .470 indicates the strength of relationship between tacit knowledge and organizational performance. The part correlation was .470. The tolerance co-efficient of 1.000 was high and is an indication that there was no collinearity problem between the independent and dependent variables. In applying tolerance in data interpretation, the rule is if any of the tolerance is small, less than 0.10 multi collinearity may be a problem. But in this case it was not so.

The findings of this study revealed that there is a significant correlation between tacit knowledge and organizational performance. This actually goes to show that tacit knowledge actually predicts organizational performance especially in these organizations being studied. This is in line with the studies of Cooke 2003, Crowley 2001, Gourlay 2002, Mcneiney 2000, when they perceived that tacit knowledge have direct impact on organizational performance and a crucial input to the innovation process in organization. It is that knowledge that is personal, difficult to articulate fully, experienced based, contextualized, job specific, held within, both known and unknown to the holder, transferred through conversation and narrative and capable of becoming explicit knowledge and vice versa. It is the type of knowledge that is used by organizational members in the performance of their work. If this knowledge is properly applied to the performance of individual

work within the organization it will lead to increased organizational performance. Although both the explicit and tacit knowledge are very important, current discussion on knowledge management advances the proposition that a firm's tacit knowledge is more likely to be a source of competitive advantage. The reason for this is that if tacit knowledge becomes explicit, it can readily be read and understood by anyone, and as such can be diffused beyond the organizational boundaries. This means that other organization can easily acquire such knowledge which then makes it not to be a strategic advantage to the owner-organization.

There is inherent difficulty associated with observing and acquiring tacit knowledge and thus limit its extent of diffusion beyond the firms boundaries. This serves to preserve the distinctive nature of the firm's tacit knowledge. That is why tacit knowledge can serve as a basis for distinctive competence and competitive advantage which explicit knowledge cannot serve. For the simple fact that tacit knowledge is embodied in human capital, this has made it valuable as a strategic advantage over competitors. Tacit knowledge is a sustainable competitive advantage to organization (Sanchez, 1998; Tsuokas, 2003).

## **5. Conclusion & Recommendations**

Knowledge as we have rightly known is a widespread currency that commands similar worth anytime and wherever. What you don't know you in reality don't know it. As observed by Frappaolo and Capshaw, (2010), this knowledge is very paramount to both individuals and corporate entities. It is what we use all the time both as an individual, jointly and as corporate entities. This knowledge comprises of both explicit and tacit. Explicit knowledge (ceremonial knowledge) is that kind of knowledge that can be expressed in prescribed language and is without difficulties transmitted among individual. Tacit knowledge on the other hand is most excellently expressed in individual experience and involving such intangible factors ranging from individual faith, perception, instinct and principles. It is that knowledge that is in the psyche or brain of the individual that posses it. The focus of this study is on how tacit knowledge can be appropriately controlled so as to augment organizational performance with emphasis on some oil companies in Nigeria as point of reference.

Tacit knowledge is very crucial to the survival and growth of these organizations. Should the organization continue to train new employees on the same job process because some trained staff has left the service of the organization? One would think that it may be economically wise for the management of these organizations to device ways and means of getting this tacit knowledge from the employees before they finally leave the service of the organization. If this is to be achieved - then how? This is why this study was carried out. From the information gathered and analysis made it was discovered that tacit knowledge actually predicts

organizational performance. This means that tacit knowledge has direct and positive relationship or impact on organizational performance. Since tacit knowledge is seen to actually predict organizational performance, it should be properly managed taking into consideration all the factors in the environment that tend to have any relationship with the management of tacit knowledge and organizational performance.

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