Knowledge Management Process as a Predictor on Organizational Performance in Dubai Government Departments

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Abstract

In recent years, the concept of Knowledge Management has expanded widely in government and private sectors. The last five years have witnessed intensive discussions on Knowledge Management and its importance. The aim of this study is to examine the relationship between Knowledge Management and its aspects and its impact on the performance of the governmental institutions in the Emirate of Dubai from the point of view of the managers of these institutions. This study attempts to use the analytical descriptive method to address the subject of the research. In this light, the analytical framework drawn integrates these approaches and can be applied in empirical studies. The study uses the questionnaire in data collection ,which is valid and reliable according to the Cronbach's Alpha value. A Multiple linear regression analysis has been used to predict the OP based on KG, KSR and KST. The findings showed that KG, KSR and KST were the key predictors of OP as these explained 49.6% of the total variance in Model.

Keywords: knowledge, management, organization, performance

Introduction

Knowledge Management has become a strategy that is adopted by most developed countries and organizations to aid in further development in their societies when information, discoveries and inventions have become the main engines of the economy.

Knowledge management has been perceived as a strong element in building competitive advantage. In fact, it is considered a strategic asset for ensuring desired levels of performance. Governments across the globe are seeking ways of revamping their performance. Similarly the Governments of the UAE have realized that knowledge is one of the most valuable assets in bolstering productivity of employees (Radwan & Milhem, 2015). Knowledge management has become an integral element to the reform paradigms in the region leading to good governance, smart leadership, and positive reputation. The culture of excellence in the UAE federal government has culminated into innovative practices to guarantee the desired change (Ngah, Tai, & Bontis, 2016).

Knowledge management in Dubai has been one of the core pursuits towards achieving economic growth. The government has made deliberate effort in developing its practices in alignment to the UAE Vision 2021. The theme of 'United in Knowledge' has helped the country to find suitable indicators to evaluate the milestones in developing a knowledge economy (Jahmani, Fadiya, Abubakar, & Elrehail, 2018). In fact, the Mohammed bin Rashid Government Excellence Award has been a platform for evaluating performance results for public entities as they adjust their systems towards knowledge management and innovative practices (Rahman, Moonesar, Hossain, & Islam, 2018).

Despite the growing interest in the concept of Knowledge Management, there is a clear controversy over its definition. The concept of Knowledge Management refers to different processes and events by discovering new knowledge. It is a combination of beliefs and information within a framework that ensures the assessment of information and participation in new experiences (Girard & Girard, 2015). Knowledge Management lies in the organization's ability to innovate. It can also be defined as the processes and practices used by enterprises to establish and use knowledge sharing (Dalkir, 2005).

Knowledge Management is an organized plan for the creation, generation, acquisition, exchange, transfer and application of explicit knowledge as organizational assets to encourage innovation and enhance competitive advantage (Barclay & Murray, 1997).

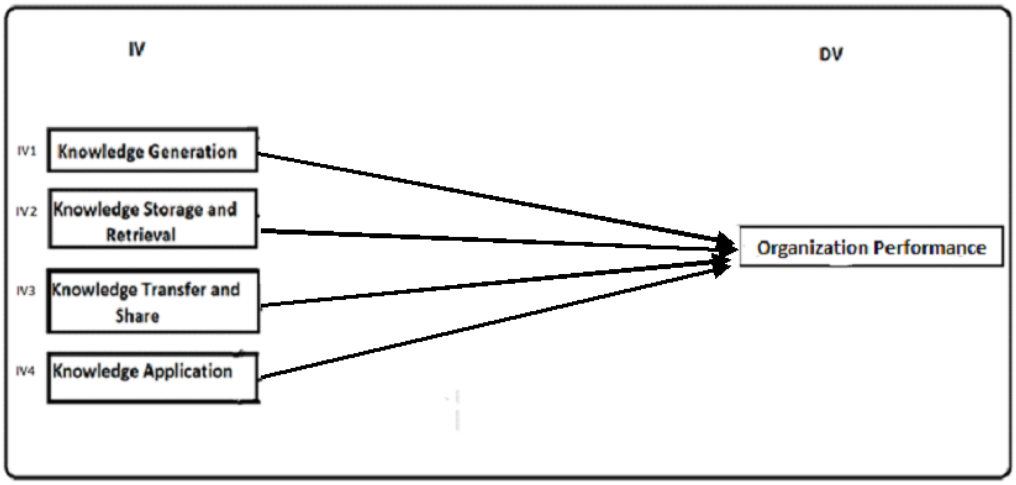

Figure 1: Proposed Conceptual Framework.

Problem Statement

The big transition at knowledge requires effective plans, strategies and management. According to Federal Authority for Competitiveness and statistics, the actual number of the population of the United Arab Emirates until 31 December 2016 was 9,121,167 people consisting of 947.9 thousand citizens and the rest are of different nationalities (United Nations, 2017).

The number of residents in Dubai recorded by Dubai Statistics Center in 2016 was 3,808,600 people. Never the less, there are more than 120 nationalities in the United Arab Emirates concentrated in Dubai, that diversity will bring different knowledge and information to the society. However, the main question would be; how to manage knowledge among them? Diversification of the workforce provides organizations with the privilege of the accessibility to different ideas, skills, and it enhances the organizations' competitive edge (Elmuti, 2001). This research aims to figure out if Knowledge Management process is a good predictor of Organization performance of the government sector institutions in the emirate of Dubai.

What is the relationship between knowledge management process and Organization performance of government department in Dubai?

Is knowledge management process is a good predictor of Organization performance of government department in Dubai?

Methods

The researchers agreed that the descriptive method, which will be used in this study, is the most appropriate for the nature of this type of studies. It is a method that gives a clear picture of the phenomenon of a study by collecting facts, data and their classification.

Quantitative method focuses on gathering numerical or statistical data and generalizing it across a group of people to explain a phenomenon. It is data analyses statistically using computational techniques. The reason of choosing quantitative method is because it is often considered reliable. In addition, a large sample will be taken because in most cases it gives a comprehensive picture of a particular phenomenon. (Muijs, 2011)

Population and sampling methods

The research population for this study includes the government institutions (seven public Departments). This research used a systematic sample that consisted of the managers of the knowledge department, heads of departments or those

responsible for human resources and information technology working in government institutions in the emirate of Dubai, as well as different level of employees in several departments. Data collected from the sample by distributing the questionnaire through e-mails.

The questionnaire was distributed to a sample of 60 participants from a selected population. In which the Cronbach's Alpha score was used to measure their responses. As a result, the Cronbach's Alpha score average calculation was (0.723), which was above the acceptable level (0.7). This proves that the questions are reliable and the questionnaire is valid.

Table 1: summarizes the Cronbach's Alpha scores of the questionnaire (Panayides, 2013).

Variables	*Cronbach's Alpha score*
Knowledge Generation	*0.750*
Knowledge Storage and Retrieval	*0.728*
Knowledge Share and Transfer	*0.756*
Knowledge Application	*0.733*

Scholars have used different sample sizes in order to collect data; Table 2 shows the sample sizes for several studies conducted on the subject of Knowledge Management. The ranges used in these studies starting from around 33 as the minimum to 426 as the maximum. The average sample size of all studies found to be around 215 participants.

Table 2: Sample sizes according to the literature review

Authors	*Sample size*
(Byukusenge,Munene&Orobia, 2016)	*234*
(Alrubaiee, Alzubi&Hanandeh, 2015)	*92*
(Al-Qarioti, 2015)	*300*
(Ahmed, Fiaz&Shoaib, 2015)	*256*
(Omogeafe& Friday, 2014)	*389*
(Al-Ghazi ,2014)	*101*
(Saini ,2013)	*250*
(Alsalim& Mohamed, 2013)	*33*
(Gholami, Asli, Shirkouhi&Noruzy, 2013)	*282*
(Alhawari& Al-Jarrah, 2012)	*77*
(Rašul a, VesnaBosilj Vu kšić&Štemb erg er, 2012)	*329*
(Daud& Yusuf, 2008)	*100*
(Lee & Choi, 2003)	*426*

Instruments (Questionnaire)

After reviewing the literature of the subject, the questionnaire developed for this study designed to be a closed-ended type. The questionnaire is finalized in two parts as follows: Section I: Includes the demographic data of the study sample using five main categories; (age, gender, education level, position and years of experiences). Section II: includes one sections where the first one consists of the four Knowledge Management processes (knowledge generation (KG), knowledge storage and retrieval (KSR), knowledge share and transfer (KST) and knowledge application (KA) where each variable will be measured using a set of five questions. Dependent variable Organization Performance (OP) where each variable will be measured using a set of five questions. The questionnaire scale that measure each variable was designed after examining a number of previous studies in order to come up with a suitable indicators. These studies helped formulating the final questionnaire (Ahmed, Fiaz and Shoaib, 2015; Downes, 2014; Edwards, Handzic, Carlsson & Nissen, 2003; Lee and Choi, 2003).

Table 3: Number of items in questionnaires

Dimension	No. of Items
Knowledge generation	5
Knowledge storage and retrieval	5
Knowledge transfer and share	5
Knowledge application	5
Government sector performance	5
Total	25

According to the literature review, researchers conducted about the subject of Knowledge Management framework have been using a six-point Likert scale where (six ="Strongly agree".) and (one ="Strongly disagree".).

Research Results

Stepwise regression was employed by using OP as the dependent variable and KOP constructs as independent variables to regress all predictor onto the dependent once. Table 4 displays the correlations between the variables.

Table 4. Correlations between Predictor Variables

	OP	*KST*	*KSR*	*KG*	*KA*
OP	*1*	*.354***	*.626***	*.671***	*.354***
KST	*.354***	*1*	*.331***	*.349***	*.881***
KSR	*.626***	*.331***	*1*	*.753***	*.331***
KG	*.671***	*.349***	*.753***	*1*	*.351***
KA	*.354***	*.881***	*.331***	*.351***	*1*

**. Correlation is significant at the 0.01 level (2-tailed).

With respect to correlations between knowledge management process subscales and orgnization performance, although the values of the coefficients varied from .354 (0P and KST) to .881 (KST and KA) yet all of the coefficients are positively correlated. Such results allows us to appreciate the links existing between the different knowledge management process components.

To get more information about the goodness of fit of a model, the results about R Square is presented in Table 5.

Table 5. Model Summary

Model	*R*	*R Square*	*Adjusted R Square*	*Std. Error of the Estimate*
1	*.671[a]*	*.450*	*.449*	*.736*
2	*.696[b]*	*.484*	*.483*	*.714*
3	*.704[c]*	*.496*	*.493*	*.706*

a. Predictors: (Constant), KG
b. Predictors: (Constant), KG, KSR
c. Predictors: (Constant), KG, KSR, KST

Between models 1 and 2, the addition of KSR increased the R^2 values marginally from 0.45 to 0.484, while between models 2 and 3, the addition of KST increased the R^2 values marginally from 0.484 to 0.496. Therefore, it can be seen that among the independent variables, organization performance were primarily influenced by KGMEAN, KSRMEAN, and KSTMEAN.

These three variables explained 49.6% of the total model variance. For more information about the model, Table 6 shows the regression ANOVA, which tests for a linear relationship between the variables.

Table 6. The regression ANOVA

Model		*Sum of Squares*	*df*	*Mean Square*	*F*	*Sig.*
1	*Regression*	*259.946*	*1*	*259.946*	*479.375*	*.000[b]*
	Residual	*317.223*	*585*	*.542*		
	Total	*577.169*	*586*			
2	*Regression*	*279.561*	*2*	*139.781*	*274.294*	*.000[c]*
	Residual	*297.607*	*584*	*.510*		
	Total	*577.169*	*586*			
3	*Regression*	*286.259*	*3*	*95.420*	*191.227*	*.000[d]*
	Residual	*290.909*	*583*	*.499*		
	Total	*577.169*	*586*			

a. Dependent Variable: OP
b. Predictors: (Constant), KG
c. Predictors: (Constant), KG, KSR
d. Predictors: (Constant), KG, KSR, KST

Stepwise regression of the models was statistically significant. The results in the ANOVA Table show that F values are significant beyond the 0.01 level for the three models; model 1($F(1, 585) = 479.4$, $p < .001$), model 2($F(2, 584) = 274.3$, $p < .001$) and model 3($F(3, 583) = 191.2$, $p < .001$). The full model R^2 was significantly greater than zero, $R^2 = 49.6\%$.

Analysis of regression coefficients (Table 7) indicated that the three constructs KG, KSR and KST have a stronger influence in OP, as indicated by the beta values for Model 3 (KG (Beta = 0.434, $p < .01$), KSR (Beta = 0.262, $p < .01$) and KST (Beta = 0.116, $p < .01$) revealing that they had positive prediction on OP.

Table 7. Regression output (Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.545	.155		9.956	.000
	KG	.691	.032	.671	21.895	.000
2	(Constant)	1.248	.158		7.903	.000
	KG	.474	.046	.460	10.204	.000
	KSR	.281	.045	.280	6.204	.000
3	(Constant)	1.149	.159		7.248	.000
	KG	.447	.047	.434	9.593	.000
	KSR	.262	.045	.262	5.822	.000
	KST	.075	.021	.116	3.664	.000

a. Dependent Variable: OPMEAN

Conclusion

The empirical results alongside the literature review shows that there is a significant relationship between each of the four predictors (KG, KSR, and KST & KA) and the Organizational Performance. It has been illustrated that each of the predictors significantly influences OP individually.

With respect to correlations between the predictors themselves and between them & OP, all the coefficients are positively correlated. According to these results, we can conclude that each of the four processes can considered a good predictor for measuring the organizational performance.

Stepwise regression of the models was statistically significant with an adjusted R^2 of 0.493. Analysis of regression coefficients (Table 7) indicated that the three constructs KG, KSR and KST had a stronger influence in OP. Studies conducted to date employed varied and sophisticated research methods and they have yielded positive results in enhancing OP.

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