International Academic Institute for Science and Technology

International Academic Journal of Business Management
Vol. 2, No. 1, 2015, pp. 28-37.

ISSN 2454-2768

International Academic Journal of Business Management

www.iaiest.com

The Study of Effect of Knowledge Management on Organizational Performance in Golrang Industrial Group

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Abstract

The aim of the research is to study the effect of knowledge management on organizational performance in Golrang industrial group. The method and nature of the research is descriptive-correlation with an applied target. The statistical population of the research consist of all senior and middle managers of Golrang Industrial Group totally 700 people with at least one year of work experience and 248 people were selected by calculating Cochran's formula and 248 people selected using the simple random sampling method and studied in 2015. To confirm the validity and reliability of the content of the questionnaire, Cronbach's alpha was used. Test of the research hypotheses and its analysis model was done based on equations structural modeling method using Lisrel software. The results obtained from structural model significance numbers certify the relationship among variables. The findings of the research show that there is a positive and significant relationship between knowledge management and organizational performance.

Keywords: Knowledge Management, Organizational Performance, Golrang Industrial Group

Introduction:

Today, organizational performance has become one of the most significant and interesting subjects and this tendency has been updated both in the research and applied fields and led to many innovations. The world today, particularly organizations, are subject to changes and developments and one of the most important factors in these changes is keeping with the changes and given that optimum organizational performance can be a major factor in keeping with the changes, factors associated with this change are considered by researchers.

Organizational performance is a wide combination of non-tangible and tangible receipts. The various models tried to introduce and evaluate the organizational performance. The study of these models shows that firstly the changes of organizational performance should be measured and assessed; secondly, the changes of organizational performance should be considered at all levels of the organization and individual and group goals in the organization should be in line with organizational goals (Allameh and Moghaddami, 2010).

During the research, many variables affect the performance and effectiveness of the organization. One of the variables is knowledge management (Lee & Choi, 2003; Zheng et al., 2008).

Knowledge management is a strategy in which the conceptual investment of an organization including registered information and talents of their members is applied in order to increase productivity, gain new values, increase competitiveness, educate managers and the organization to create skills and optimize the activities.

The ultimate goal of knowledge management is application of knowledge to improve organizational performance (Anvari, Rostami and Shahaei, 2009). The knowledge management is a new way of thinking about the organization and sharing intellectual and innovative resources of organization and a way for efficiency, performance improvement, costs reduction and optimization of organizational knowledge to enhance the performance by different ways. Knowledge management processes in an organization have a significant impact on organizational performance (Gold et al., 2001).

Given the above, the basic hypothesis of the research about the relationship between knowledge management and organizational performance is considered. So this research examines the effect of knowledge management on organizational performance in Golrang Industrial Group. Given the outlook for the Golrang Industrial Group which aims to be the world's top 500 companies listed in 2025, so the organizational performance and its improvement have an important role in achieving this vision, so the study of the effect of influencing variables such as knowledge management is of particular importance on organizational performance.

In this research, the variable of knowledge management with the factors such as knowledge creation, knowledge storage, the dissemination of knowledge and the application of knowledge and organizational performance variable will be examined by the factors such as financial performance, efficiency, growth and development.

Theoretical basis of research:

Knowledge Management

Knowledge management is an integrated process for coordination across the organization to achieve its objectives and it can create the necessary capacity to enhance competitive advantage, customer focus, improvement of employee relations, innovation and less costs. (Zheng et al., 2010).

Bryan Bergeron believes that the knowledge management of the qualitative and quantitative resources will bring cost savings and performance improvement and increased market share to the organization. The role of knowledge management on organizational performance have been identified in a lot of research.

According to Bhatt (2001), Knowledge management includes the acquisition, registration, transfer, creation and application of` knowledge to the organization. The knowledge management is the method of identification, organization and processing of information to create knowledge, which is distributed. In other words, they are available to create more knowledge. In this research, the variable of knowledge management is measured with the components of knowledge creation, knowledge storage, knowledge dissemination and use of knowledge. It should be noted that in this research to measure the said components of knowledge management, knowledge management standard questionnaire of Newman and Conrad (1999) will be used. Today, most organizations are following the implementation of knowledge management programs. Studies also show that a knowledge-based approach can increase the effectiveness of strategic alliances (Bonits, 2002).

By this description, explaining the importance of knowledge management and its impact on organizational performance largely depends on the power to justify and express its role in increasing the organizational competitiveness and gain a greater share of the market. One of the most logical approaches in the field is measuring the impact of knowledge management on organizational performance by measuring knowledge management in general performance measurement system of the organization or in individual processes and project level. This means that we should open up a row for knowledge management among other measurement rows and take into account the performance of one number and certain amount for knowledge management share, although in practice it is very hard (Shaemi Barzaki, 2005).

The Knowledge Management Model of Newman and Conrad

The Knowledge management general model of Newman and Conrad (1999) forms an axis composed of acquisition and organization to establishment and re-use or dissemination of knowledge. In this model, four interactive process of knowledge have been identified for knowledge management as knowledge creation, knowledge preservation and maintenance, transfer or sharing of knowledge and the use of knowledge. The dimensions and variables of knowledge management is provided in Table 1.

Table 1

Definition	Component	Main variable
The activities related to new knowledge entrance	Knowledge creation	Knowledge management
The ability of organization to preserve and maintain knowledge	Knowledge storage	
The activities related to knowledge current from a section to other section of the organization	Knowledge Dissemination	
Knowledge execution in organizational processes	Knowledge application	

Organizational performance

Organizational performance is how to perform missions, tasks and organizational activities and the obtained results (Haghighi et al., 2010). Organizational performance is an indicator that measures the objectives of an organization or institution (Ho, 2008). Organizational performance is a broad sense that includes what the company produces, as well as areas where they interact. In other words, organizational performance is to achieve organizational or social goals or go beyond them and perform the organization's responsibilities (Aghajani et al., 2013).

In this research, to measure organizational performance, the questionnaire adapted from Filicio et al (2012) were used and to measure organizational performance three dimensions are proposed including financial performance, productivity, growth and development.

In the present research, it is done to assess the performance according to the study carried out by Filicio et al (2012) and to measure organizational performance three dimensions of financial performance, efficiency, growth and development. It is worth mentioning that because in the model studied by Filicio et al, financial indicators and non-financial indicators, that is the growth of the company and efficiency are considered, this model for evaluating the organizational performance is selected. Dimensions and variables of organizational performance are presented in Table 2.

Table 2

Definition	**Index**	**Variable**
The relation between sales in the year and the average of employees number	Efficiency	Organizational performance
Including return on sales and return on assets	Financial performance	
Added market share and further development	Growth and development	

Conceptual model of the research

To carry out scientific and systematic research, a scientific and theoretical framework is required that is called the conceptual model. According to the research literature, the model presented in Figure 1 is shown.

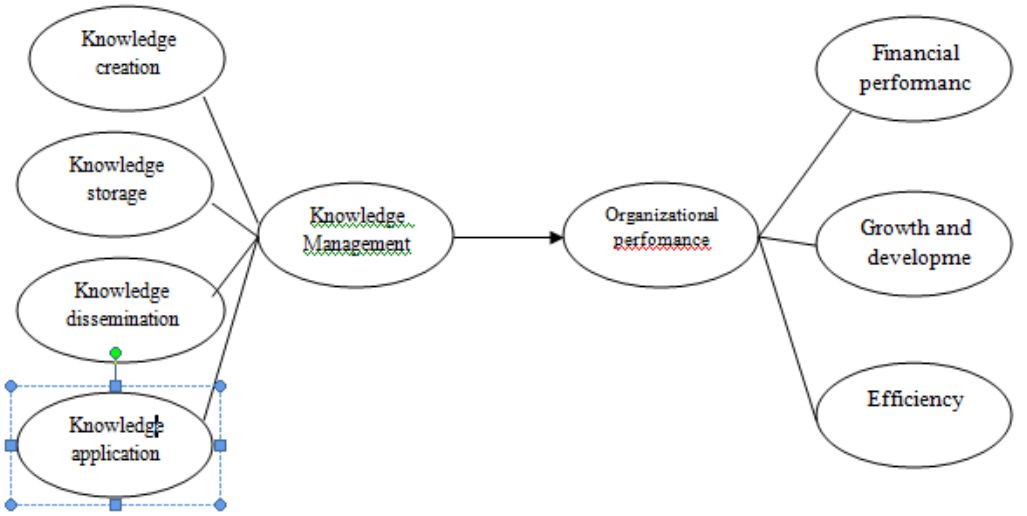


Figure 1

Research methodology

The method and nature of the research is descriptive-correlation with an applied target. The statistical population of the research consist of all senior and middle managers of Golrang Industrial Group with at least one year of work experience. The simple random sampling method was used to estimate the sample size and total population was 700 and based on Morgan table the required sample was 248 people.

The questionnaires of the present research is composed of two parts of general and specific questions and in the part of general questions, the questions about demographics describe the characteristics of respondents and the specific questions part describes the variables related to the research.

In this research, two standard questionnaires of knowledge management (Newman and Conrad) containing 21 questions and the performance questionnaire (Filicio et al.) with 8 questions were used. In these questionnaires, five-item Likert scale was used to answer the set as the underlying hypothesis test and includes very low, low, medium, high, very high.

Before any analysis on the data collected and statistical inference, we must ensure reliability and validity of the measurement. The reliability of the questionnaire was measured by Cronbach's alpha test and the

test results showed that the questionnaires used have the reliability and accuracy. There is also a variety of methods to assess the validity of this research, and given that the research variables are composed of several dimensions (components), the exploratory operational analysis test was used. The operational analysis should ensure that the data can be used to analyze the analysis or not. In other words, is the amount of data for operational analysis are appropriate or not? For this purpose, KMO index and Bartlett's test were used. According to the two tests, the data are appropriate for analysis when KMO index is greater than 0.6 and close to one and sig of Bartlett test is less than 0.05. The output of these tests are presented in the following tables.

To standardize the scales made foe measurement of the research variables, the intended scales in the form of a questionnaire were distributed randomly among 30 participants. Reliability and validity of the questionnaires are presented in Table 3.

Table 3

Bartlett's test (KMO)	Cronbach's alpha	Variable
0.82	0.71	Organizational performance
0.79	0.78	Knowledge management

According to the table above we can see that since Cronbach's alpha is a questionnaire more than 0.7 and also the coefficient of Bartlett's test is more than 0.7, so the questionnaire' has the reliability and validity for this research.

The Analysis of Data

To analyze the data and the correlation, the descriptive statistics method and techniques of structural equations modeling (SEM) are used. LISREL software is used for the calculation of the part.

Research Findings

The demographics of respondents is as follows: 73% of respondents were men and 27% women, 13% have a work experience less than 5 years, 25% between 6 to 10 years, 19% between 11 to 15 years, 24% between 16 to 20 years and 17 percent more than 20 years. In terms of education, 41% hold Bachelor's Degree, 36% Master's Degree and 24% Ph.D.

In the inferential analysis, the structural validity will be tested before the hypotheses test using confirmatory operational analysis test. Fit test in confirmatory analysis and direction, RMSEA indicator or the square root of the variance estimation of approximation error is less than 8% and $\frac{x^2}{df}$ index less than 3 and (GFH, CFL, IFI, NNFI) is higher than 90%. If the value (T-Value) of significant coefficients of

each variable is higher than 2 and less than 2, the model has a good fit, or there is a reasonable approximation of the society.

Because in this section, the output of the software is estimated without any change, before observing the software output, the following table is presented to identify abbreviations of latent and observational variables and observed Abbreviations.

Table 4

Abbreviations	Indices	Abbreviations	Research variables
KHAl	Knowledge creation	KM	Knowledge management
HEFZ	Knowledge preservation and maintenance		
ENTE	Knowledge transfer		
BKAR	Knowledge application		
ROSH	Growth	PERF	Organizational performance
MAL	Financial performance		
BAH	Efficiency		

Estimation of Model Standard

To evaluate the effects of the current variables in the model, the output is used. In this output, all coefficients and parameters of the model are standardized. Tests and comparison of the parameters estimation and representation requires standardized estimates. For this reason at this stage we will convert the non-standard estimations mainly dependent on their standardized, to the standardized estimations (Figures 2 and 3) dependent on their scale and it will affect the fit and some model parameters. For the significance of a factor, significant numbers must be higher than (2) or smaller than (-2).

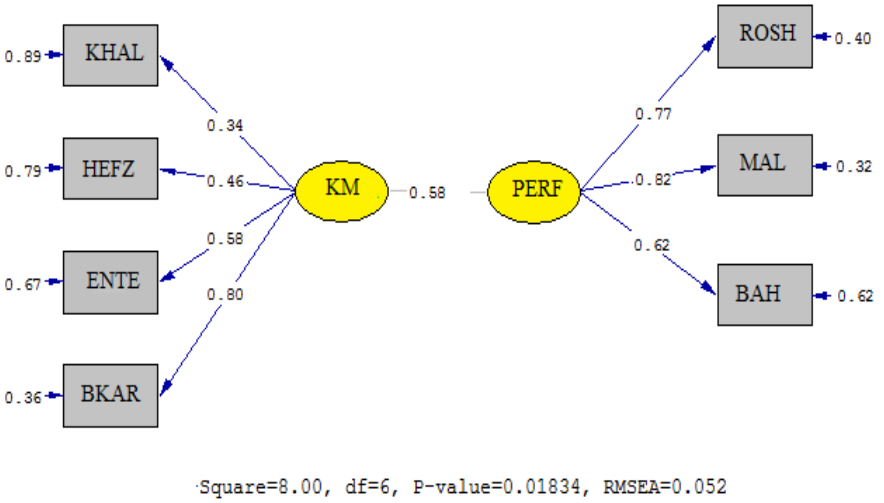


Figure 2: Standard Mode

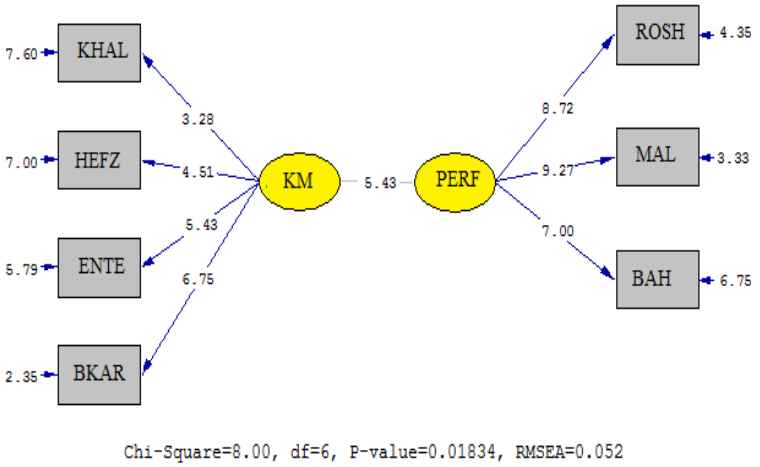


Figure 3: Significance Mode

According to the above diagrams, the variable of knowledge management has a total effect (0.58) on the variable of organizational performance.

LISREL software provides various indicators to fit the model in the text part. The indicators that are used to fit the model are composed of 30 indicators by which we can judge about the entire model (whether this model is acceptable or not, in other words, whether our data approve out theoretical bases or not).

The most common indicators reported in the majority of studies are shown in the table below. If one of these indicators is not acceptable it is not a reason to reject the model, but reflects the relative weakness of the model. This weakness may be due to sampling, the sample population or other factors.

X2/df	RMSEA	RMR	GFI	CFI	NNFI	IFI	AGFI
1.23	0.052	0.099	0.94	0.97	0.94	0.97	0.92

1. As we can see in the table, RMSEA value is equal to 0.052. In general, in the structural equation model, if the RMSEA value is less than the 0.05, the model is a very good model and if it is between 0.05 to 0.08, it is a perfect model. In this research, the model is a very good model in terms of RMSEA value.

2. The value of AGFI and GFI values are 0.92 and 0.94, respectively. Generally, in the structural equations form, if the value of two indicators is higher than 0.90, the model is in a very good conditions in terms of two indicators. As we can see in the table, in this research, the model is in a very good condition in terms of goodness of fit indicator and adjusted goodness of fit.

Conclusion:

This research aims to examine the effect of knowledge management on organizational performance in Golrang Industrial Group. According to test results (standardized coefficient equal to 0.058), it can be said that there is a direct relationship between the independent variable of knowledge management and organizational performance, and it shows that this hypothesis is confirmed. The results from the confirmation of the hypothesis are in line with the results of zero research of Fazli (2012) as presented in a paper titled “the study of effect of intra-organizational on organizational performance”.

According to certain limitations of the research, the researcher studies only the senior and junior managers with one year of work experience in Golrang Industrial Group. It is worth mentioning that in a research conducted in line with the present research, the other companies in terms of knowledge management and performance. The data of the research compare to the research on the other companies to identify differences.

On the other hand, apart from the selection of production companies’ samples, the other industries could be considered in line with the present research and the relations between the variables could be specified in a research in line with the present research through which the validity and reliability of the research and also generalization of the data will be identified and determined.

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