

# A Correlation Study between Social Capital and Knowledge Management with Emphasis on the Human Capital - The Case Study: Payame Noor University of Hormozgan (Bandarabbas)

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## Abstract

Universities because of the importance and position they play in the every countries' socio-economic development, require attention to personnel social capital at the university, because the social capital, makes effective knowledge management possible.

With respect to the importance of social and human capital and knowledge management, the present study was done to explore the relationship between social capital and knowledge management with emphasis on the human capital.

This research is survey- descriptive of correlation type and the required data were collected through library-field. The subjects in this study consist of Payame Noor University staff of Hormozgan province.

In this study, 54 staff of Bandar Abbas Payame Noor University were selected through random sampling. After gathering the required data through knowledge management questionnaire, knowledge management processes were measured based on the five dimensions such as the capture of knowledge, acquisition of knowledge, transmission of knowledge, creation of knowledge and application of knowledge. In order to provide for the reliability of the questionnaire cronbachs alpha was used. In order to check the significance of the difference between responses descriptive and inferential statistics such as regression, one way anova and t test were run using SPSS version 20. The result show that the staff means score of knowledge management was  $76/66 \pm 20/48$ . The result shows that there was a significant relationship between social capital and knowledge management. Also there was a significant relationship between social capital and the five components of knowledge management such as capture of knowledge, acquisition of knowledge, transmission of knowledge, creation of knowledge and application of knowledge. Also there was a significant relationship between human capital and the component of knowledge management.

**Keywords:** human capital, Hormozgan (Bandarabbas) Payame Noor University, knowledge management, Social capital, staff

## 1. Introduction

Universities are the type of the social systems which are the information stimulant force and are known as thinking commanders of communities.

Today in order to cope with challenges and complexities of their environment, universities and higher - education establishments have to benefit from modern approaches of management.

Knowledge management which is best created in learning and knowledge based environments is one of the most efficient ways to achieve the above mentioned goal.

Knowledge management study strategy is the process and technology for the purpose of acquisition, selection, organization, decision and application of specialty and vital information for business and work to improve the quality of decision - making and the efficiency of the organization (Riches, 2005).

Knowledge management also acts as a science which facilitates quick and easy communication, exchange and transfer of information and expresses the innovation, ability and efficiency in organizations, especially

universities (Lahijaniyan, 2006, p. 20).

The establishment of a successful knowledge management depends on various factors such as social capital which interacts with knowledge management variables.

The idea of social capital for the first time was introduced by Jane Jacobs in his classical work.

The existence of social capital can increase attraction, codification and transmission of knowledge. Social capital increases knowledge management processes (Hoffman, Hoelscher, & Sherif, 2005).

According to Nahapiet and Ghoshal (1998) social capital is one of the capabilities and organizational assets that can help organizations in the creation and distribution of knowledge and create sustainable organizational advantage for them in comparison to other organizations (Nahapiet & Ghoshal, 1998).

Social capital is also an effective factor in the direction of the transfer of knowledge among personnel in organizations and helps them have a better relationship with others as a result of the necessary knowledge they have acquired.

Another factor in the establishment of knowledge management is manpower. Dedicated manpower with unique capabilities such as command over advanced technology, decision – making abilities and common sense are determining factors in the establishment of knowledge management. Thus factors such as information technology, organizational culture, organizational learning and manpower play an important part in the establishment of knowledge management.

Human capital is made up of two main dimensions of knowledge and skill (Warts, 2005; Adler & Kwon, 2009).

Considering the above mentioned information, this study investigates the role of social capital in the creation and development of knowledge management with emphasis on human capital in Hormozgan Payame Noor University. Therefore this study attempts to answer the following questions:

What is the relationship between social capital and knowledge management?

What is the main component of knowledge management?

How is the status of knowledge management between employees?

Is there a significant relationship between social capital and dimensions of knowledge management?

Is there a significant relationship between human capital and knowledge management?

Therefore, the main aim of the present study, is to determine the relationship between social capital and knowledge management at the Payame Noor University.

These secondary goals are also followed:

- determining the relationship between social capital and knowledge management components (creation of knowledge, acquisition of knowledge, capture of knowledge, transferring of knowledge, application of knowledge) at Payame Noor University.
- determining the relationship between human capital and knowledge management.
- determining the relationship between variables such as the age, gender, education degree, years of service, employment situation, job category and knowledge management.

## **2. Background and Research Theoretical**

Hoffman et al. (2005) have investigated the relationship between social capital and knowledge management and how knowledge management impacts organizational performance. The findings of their study shows that there is a significant relationship between social capital and knowledge management, and organizations with higher levels of social capital have more knowledge management compared with organizations with lower levels of social capital.

Demori et al. (2010) investigate the relationship between knowledge management and social capital at the Islamic University (from the perspective of the faculty members of Yazd University). The results of their studies show that there is a positive and significant relationship between knowledge management and social capital.

The results of the studies done by Khanifar et al. (2011) shows that there is a significant relationship between components of knowledge management and social capital.

Abili & Zarekhalili (2014) in their study showed that there is a positive and significant relationship between organizational social capital and knowledge management. Moreover test results showed that all components of social capital have a positive and significant relationship knowledge management.

Landry et al. found good evidence based on the relationship between social capital and knowledge management (Landry et al., 2002).

Danpoort and Prosatt (2009) believe that knowledge management helps to create knowledge sharing culture among personnel and create value for organization by converting human capital to the organized intellectual property (Danpoort & Prosatt, 2009, p. 12).

Specter and Anderson (2000) believe that Knowledge management is a new engine that can remove gaps and spaces. Educational institutions that use knowledge management reach to a higher degree of quality, innovation and efficiency (Specter & Anderson, 2000).

Hulse considers knowledge management as the process through which organizations find the ability to turn data into information and information into knowledge and will also be able to utilize the acquired knowledge in their decisions effectively (Abtahi & Salavati, 2007, p. 34).

### **3. Research Methodology**

#### *3.1 Location*

The present study utilized a quantitative approach by survey method, to examine the relationship between social capital and knowledge management with emphasis on the human capital in the Hormozgan (Bandar Abbas) Payame Noor University. Bandar Abbas is the biggest university Hormozgan. And also have the highest number of staff among other universities in Hormozgan.

#### *3.2 Participants*

The subjects of this study consist of all employees and professors of Hormozgan (Bandar Abbas) Payame Noor University. Fifty four employees and professors (48/1% male and 51/9% female) were selected according to simple random sampling.

#### *3.3 Research Instrument*

The instrument used in this study was a set questionnaire. in order to test knowledge management, the knowledge management questionnaire consisting of five dimensions of capture of knowledge, acquisition of knowledge, transmission of knowledge, creation of knowledge and application of knowledge was used knowledge management measured with abridged 27-items of five dimensional knowledge management scale. Respondents were asked to rate each item using 5-point likert scale with the following choices: 1= completely disagree, 2= disagree, 3= without opinion, 4= agree, 5= completely agree.

In order to provide for the reliability of the questionnaire cronbachs alpha was used. The coefficient of Cronbach alpha for social capital was 0/92 percent, for human capital 0/95 percent and for knowledge management 0/94 percent. These numbers indicate that the questionnaire used in this study enjoys a high reliability. The validity of the questionnaire has been approved by specialists in the field.

#### *3.4 Data Analyses*

Data were entered in to statistical package for social science (SPSS) to be analyzed. To analyze the data from the descriptive statistics methods and inferential statistics, such as Pearson, regression analysis, analysis of variance and t – test were used. Descriptive statistics were used to describe the level of knowledge management and inferential statistics was used to determine correlation and differences in knowledge management by age, gender, education and job categories.

#### *3.5 Research Variables Conceptual and Operational Definition*

Knowledge management: knowledge management is processes that are linked with creation, collection, organization, publication (transmission) and application of knowledge (skyrme, 2003).

Knowledge management was measured with abridged 27-items of five dimensional knowledge management scale (creation of knowledge, acquisition of knowledge, capture of knowledge, transferring of knowledge, application of knowledge).

Respondents were asked to rate each item using 5-point likert scale with the following choices: 1= completely disagree, 2= disagree, 3= without opinion, 4= agree, 5= completely agree.

Social capital: Fukoyama believes that social capital is individuals ' competences for working together, in order to achieve common goals in groups and organizations (Fukuyama, 2001). Social capital was measured based on the theory of Nahapiet and Ghoshal. In order to measure this variable 22- items consisting of three dimensions of cognitive, communicative and structural social capital scale (structural, cognitive and communication).

Respondents were asked to rate each item using 5-point likert scale with the following choices: 1= very little, 2= little, 3= moderate, 4= much. 5= too much.

Human capital: from the perspective of Chen et al., human capital includes knowledge, skills, abilities and attitudes of employees. More specifically this factor is crystallized by a combination of qualifications, attitudes and creativity of staff (Chen et al., 2004, pp. 85-100).

Human capital was measured with 16-items. Respondents were asked to rate each item using 5-point likert scale with the following choices: 1= very little, 2= little, 3= moderate, 4= much, 5= too much.

#### 4. Hypotheses

If social capital increases, then knowledge management will be more effective.

If social capital increases, then knowledge management components (creation of knowledge, acquisition of knowledge, capture of knowledge, transferring of knowledge, application of knowledge) will be more effective.

If age increases, then knowledge management will be more effective.

If the ratio of female to male increases, then knowledge management will be more effective.

If degree of education increases, then knowledge management will be more effective.

If work experience increases, then knowledge management will be more effective.

If employment status improves, then knowledge management will be more effective.

If the job is scientific, then knowledge management will be more effective.

If human capital increases, then knowledge management will be more effective.

#### 5. Results

##### 5.1 Descriptive Statistics

Based on the results of the descriptive statistics in the sample it was seen in this study 48/1 percent of the subjects are male and 51/9 percent are female.

31 people (57/4 percent) less than 35 year, 19 people (35/2percent) between the ages of 35- 45and 4people (7/4 percent) higher than 45 year. Regarding marital status 33/3 percent are single and 66/7 percent are married.

24/1percent of the subjects have associate degree, 51/9 bachelors' degree and 24/1 percent master's degree or higher. The most work experience was between 6-10 years with the frequency of 44/4 percent and the least work experience was between 11- 15 years with the frequency of 13percent in terms of employment status, the majority of the respondents were working on a contract based. 63percent of them were clerical and 37percent were faculty members.

Table 1 shows average and standard deviation of knowledge management. The average score of knowledge management among the employees was 76/66. As the table shows knowledge transfer has the highest score (16/70) and application of knowledge has the lowest score (10/92).

Table 1. Mean and standard deviation knowledge management and its dimensions

variables	Mean ± Standard deviation
Creation of knowledge	11/01±4/20
Acquisition of knowledge	12/01± 3/25
Capture of knowledge	14/50± 4/51
Transferring of knowledge	16/70±4/86
Application of knowledge	10/92±3/46
knowledge management	76/66±20/48

##### 5.2 Inferential Statistics

The findings of the relationship between social capital and knowledge management using regression method, showed that there is a positive and significant relationship between these two variables in the level of significance 0/99 ( $r= 0/88$  and  $p\leq 0/01$ ). So the main research hypothesis with the significance level of 0/99 is confirmed.

Table 2. Pearson correlation coefficient between social capital and knowledge management

Variable	R	R <sup>2</sup>	Adj.R <sup>2</sup>	Standard error	B	Beta	F	T	Sig
social capital	0/881	0/775	0/771	9/80	1/18	0/881	179/43	13/39	0/000

As results indicate social capital has a positive and significant relationship with five dimensions of knowledge management. This is an indication of the confirmation of the research hypothesis.

Table 3. The relationship between the mean of social capital and dimensions of knowledge management

Dimensions of knowledge management	R	R <sup>2</sup>	Adj.R <sup>2</sup>	Standard error	B	Beta	F	Sig
knowledge creation	0/784	0/614	0/607	2/63	0/216	0/784	82/87	0/000
knowledge acquisition	0/740	0/548	0/539	2/20	0/158	0/740	62/94	0/000
knowledge capture	0/696	0/485	0/475	3/27	0/206	0/696	48/88	0/000
knowledge transfer	0/801	0/641	0/635	2/94	0/255	0/801	93/02	0/000
knowledge application	0/745	0/555	0/547	2/33	0/169	0/745	64/87	0/000

In order to examine the existence of assumptions of the relationship between the age and knowledge management ANOVA was used as we see the table people in the age range of less than 35years, 35- 45 years and more than45years,had the averages of 78/51,70/10, 93/50 in knowledge management respectively. In fact, the average score of knowledge management has been in between higher in people over 45years. This hypothesis is also confirmed with the significance level of 0/054.

Table 4. Results of the ANOVA of knowledge management with age

Age	Mean	F	Sig
less than 35years	78/51		
35- 45 years	70/10	2/59	0/054
more than45years	93/50		

With the significance level of 0/538 this hypothesis which deals with the meaningful difference between knowledge management and gender cannot be confirmed.

Table 5. Test results of mean difference of knowledge management in terms of gender

gender	Frequency	Mean	Standard deviation	Levenes Test	T	Sig
Female	28	78/32	23/61			
Male	26	74/88	16/76	2/40	0/620	0/538

Table 6 shows the relationship between variables such as degree of education, work experience, employment status and knowledge management using ANOVA. We can see that there is no significant relationship between these variables and the knowledge management.

Table 6. Results of the analysis of variance of knowledge management with degree of education, work experience and employment status

variable	F	Sig
education degree	0/357	0/701
years of service	1/89	0/160
employment situation	0/342	0/712

According to the level of significant, this hypothesis which deals with the meaningful difference between knowledge management and job is not confirmed.

Table 7. Test results of mean difference of knowledge management in terms of job categories

job categories	Frequency	Mean	Standard deviation	Levenes Test	T	Sig
administrative	34	75/29	22/66	1/56	0/491	0/216
scientific	20	79/00	16/41			

To examine the relationship between human capital and knowledge management regression analysis was used.  $F = 194 / 18$  with the significant level  $000 / 0$  shows that there is a significant relationship between the two variables.

Table 8. Pearson correlation coefficient between human capital and knowledge management

Variable	R	$R^2$	Adj. $R^2$	Standard error	B	Beta	F	T	Sig
Human capital	0/830	0/688	0/685	13/27	1/37	0/830	194/18	13/93	0/000

## 6. Discussion

Universities and research centers have undeniable role in bringing up a knowledgeable employees learning organizations different from other organizations benefit from the knowledgeable workers as human capital. So, only after the establishment of the knowledge management system in their structure this important goal is achievable.

Organizations in order to benefit from effective knowledge management for their organization must try to strengthen the social capital and mutual trust among their staff.

## 7. Conclusion

Results of testing research hypotheses shows that the average score of knowledge management among people over 45 years is more compared to other two age groups (less than 35years, 35-45years). Thus, the assumption of the existence of the relationship between age and knowledge management is confirmed.

As the results of the study show social capital has a positive and significant relationship with the five dimensions of knowledge management. This finding is in line with the results of the study done by Abili and Zarekhalili (2014), Hoffiman et al. (2005), and Khanifar (2011).

This study also investigates the relationship between human capital and knowledge management and the findings of the study shows that human capital has positive and significant relationship with knowledge management.

Another finding of this study confirms that there is not a significant relationship between gender, degree of education, the employment status, work experience, type of job and knowledge management.

Other results of this study is that there is no a significant relationship between gender and knowledge management. This finding is in line with the results of the study (Rajaeepour & Rahimi, 2009).

## 8. Suggestions

In order to strengthen the growth of social capital and knowledge management the following can be considered:

-One way to develop social capital is strengthening trust. Trust is a major component of social capital. Trust is shaped in social relations and underlies the partnership and co - operation between members. The transfer of knowledge and information in the organization depends on people to facilitate its transfer. All the factors that prevent or encourage interpersonal communication will have an effect on the transfer of knowledge. As a result trust is emphasized.

-Providing active participation for the employees in order to solve the problems of the organization and create a climate of mutual trust.

-Encouraging working procedures at universities so that employment policy should not be based only on specialty, but on the person's ability to communicate with others and the person's interest in working with the group.

-Knowledge creation is an important indicator for the implementation of knowledge management. With regards to the meaningful relationship between social capital and creation knowledge, it is suggested that universities value knowledge creation mechanisms.

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