

**Research Article**

**EXAMINATION OF THE RELATIONSHIP BETWEEN KNOWLEDGE  
MANAGEMENT CAPABILITIES AND ORGANIZATIONAL  
EFFECTIVENESS IN A SELECTION OF GOLESTAN PROVINCE  
ISLAMIC AZAD UNIVERSITY**

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**ABSTRACT**

**Purpose:** today, knowledge management is a suitable attitude to create integrity between new requirements of the competition atmosphere dominant in universities and efforts made by them to produce knowledge and obtain better degree. The present study aims at examining the relationship between capabilities of knowledge management in selected branches of Golestan province Islamic Azad University (Gonbad and Aliabad Katoul branches). **Materials and Methods:** the method of the present study was descriptive of correlation type, and questionnaire was used in order to collect data. Statistical population of this study included 473 personnel of Islamic Azad University (Gonbad and Aliabad Katoul branches) in Golestan province, where 214 out of them were selected from among the personnel in stratified method. Data were examined with structural equations model. **Findings:** findings suggest a meaningful relationship between infrastructural capabilities of knowledge management with knowledge sharing and organizational effectiveness, procedural capabilities of knowledge management and knowledge sharing and organizational effectiveness, and between knowledge sharing and organizational effectiveness. Results also showed that knowledge sharing plays an intermediate role in the relationship between infrastructural and procedural capabilities of knowledge management with organizational effectiveness. **Conclusion:** Generally, it is suggested to Azad Universities to increase organization's effectiveness and to improve the status of knowledge sharing by improving the status of procedural capabilities of knowledge management.

**Keywords:** *Infrastructural Capabilities of Knowledge Management, Procedural Capabilities of Knowledge Management Knowledge Sharing, Organizational Effectiveness*

**INTRODUCTION**

In recent years, different organizations and companies have started to join the process of knowledge, and new notions such as knowledge work, knowledge staff, knowledge management and knowledge-based organizations suggest intensification of this process. Using these terms, Peter Drocker marks emergence of new type of organizations where the power of mind is dominating instead of hands. A knowledge-based organization may achieve abilities that make a huge power out of a faint one. Knowledge management is the new endeavor of the century known as knowledge era, in order to maintain, guide, and directed increase of knowledge capital of organizations, pointing at the fact that investment in sciences yields in the best and more profit (Alvani and Danayi Fard, 2001). Knowledge management implies efforts taken systematically in order to find, create, accessibility, and utilization of organization's hidden capitals, empowering the culture of continuous learning and knowledge sharing within the organization (Monavvarian *et al.*, 2012). In a different definition, knowledge management is a set of approaches in order to create and share knowledge in organizations, which maximizes achievement of organization's mission and objectives (Townley, 2001). It can be said that the main competitive advantage of organizations underlies their knowledge capital. Today, the world's biggest companies have achieved their dominance not in stockpiled assets from factories and even from their pioneering huge markets, but from their flowing knowledge; therefore, organizations are positive that they should manage their mental resources and activities to remain competitive (Ghazizadeh and Atayi, 2013). Sharing the knowledge

### **Research Article**

leads to sharing ideas. Ideas bring about maximum effect when they are widely used, instead of being provided only to a limited number of people (Poorserajian *et al.*, 2013). On the other hand, one of the management discourses that may be both interesting and applicable to all managers is organization's effectiveness and efficiency. Obviously, committed and responsible managers are willing to know what the position of their organization and the criteria they must keep in mind in order to evaluate performance of their unit or organization. Deffet believes that organization's effectiveness is a degree or extent to which an organization gets close to intended objectives. This definition shows that all organizations must determine at a point in time, that how much they have acted in line with achieving their goals and have done so (Abdolkarimi, 2006). Studies show that organizational knowledge optimization through different methods (determining shortcomings in organizational knowledge, more productivity from human capitals, more efficient and effective learning by the staff, providing goods and services with value added, increasing customers' satisfaction, preventing repetition of mistakes, decreasing duplication and thrift upon solving problems, arising creativity and innovation) leads to increase in organization's efficiency and effectiveness, and inevitably, we should manage the knowledge in order to assure desirable provision of goods and services to customers and winning their satisfaction (Rayisi *et al.*, 2013). Universities and higher education institutes, like any other organizations involved in knowledge management are facing challenges such as financial pressures, fast growth of technology, changing role of the staff, competitive values, and generally, fast changing of the world on one hand, and they try to achieve their basic goals namely education, research and giving services to the society on the other. Correct treatment of challenges and achieving the goals is possible only if universities can manage processes related to knowledge creation in an informed and clear way, having a facile solution to accept beliefs and processes related to knowledge management. Knowledge management is a suitable approach towards creating integrity among new requirements of competitive atmosphere dominant in universities, as well as efforts universities take to create knowledge and achieve a better ranking in that sense. Knowledge management is a suitable approach for efficient utilization of knowledge and individuals' mental forces in the universities. By implementing knowledge management, saving, transferring, and restoration of existing knowledge, as well as creating interaction between researchers would be facilitated and accelerated, which in turn may enhance research level and increase of knowledge creation, helping universities in achieving their goals (Adineh *et al.*, 2011). Knowledge management capabilities in the current study include variables of "infrastructural capabilities" and "knowledge procedural capabilities". One of the requirements necessary for knowledge management is providing required infrastructure for its implementation. Unless the required infrastructure is not provided, knowledge management and considering it as an axis of development and national economy wouldn't be realized. Therefore, the present study sought to answer the question that if knowledge management capabilities are effective on organizational effectiveness with regards to intermediate role of knowledge sharing in selected branches of Golestan province Islamic Azad University.

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#### **Methodology**

The present research is descriptive, of correlation type. The statistical population includes all the staffs of Azad university branches in Gonbad (178 persons) and Aliabad Katoul (295 persons), who were selected in random stratified sampling method. In this study, the independent hidden variable was knowledge management capabilities (procedural, infrastructural), dependent hidden variables were organizational effectiveness, and the intermediate hidden variable was knowledge sharing. At the stage of launching the study, the way of answering the tests was explained for the participants in details, after providing preliminary explanations about measurement tool and the purpose of conducting the study. regarding moral considerations after obtaining written consent from the individuals and providing necessary information, they were assured that the received information will be used in this research only, being secured from any sort of abuse. Researcher-made questionnaire was used to measure research variables. The said questionnaire contained questions being able to measure variables of infrastructural capabilities

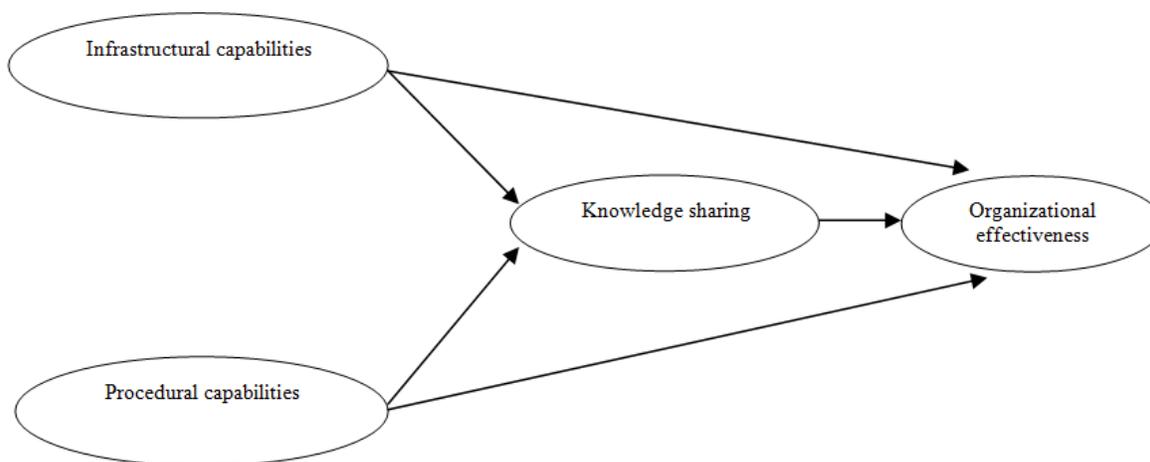
**Research Article**

of knowledge, procedural capabilities of knowledge, knowledge sharing, and organizational effectiveness. Its scale of answering is Likert’s five-point spectrum. A copy was provided to the professors in order to approve its validity. Then, some of the questions being heavy, unclear, equivocal, or irrelevant to the issue, local territory, and statistical population were removed from the questionnaire, whereby some other questions and dictions were included in a more articulated and better way. Cronbach’s alpha method was used to determine its stability. Results showed that the questionnaire was well stable (table 1).

**Table 1: Cronbach’s Alpha Valu**

| Cronbach’s Alpha Coefficient | Number of Questions | Variable                                  |
|------------------------------|---------------------|---|
| 0.875                        | 18                  | Infrastructural capabilities of knowledge |
| 0.963                        | 16                  | Procedural capabilities of knowledge      |
| 0.880                        | 5                   | Knowledge sharing                         |
| 0.956                        | 10                  | Organizational effectiveness              |

The conceptual model of the relationship between variables of the study was as follows (figure 1). Structural equation model was used for data analysis. In all analyses it was held that  $p \leq 0.05$ .



**Figure 1: The conceptual model of the study**

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**Results**

Table 2 shows the average and standard deviation of study variables.

**Table 2: Descriptive statistics of study variables**

| Variance | Criteria deviation | Average | Study variables                           |
|----------|--------------------|---------|---|
| 0.388    | 0.62277            | 3.9948  | Infrastructural capabilities of knowledge |
| 0.341    | 0.58420            | 3.7529  | Procedural capabilities of knowledge      |
| 0.528    | 0.72965            | 3.9374  | Knowledge sharing                         |
| 0.370    | 0.60798            | 3.7598  | Organizational effectiveness              |

To examine fit of the model with the criteria, proportion of Chi square quadrate with degree of freedom ( $\chi^2/df$ ), comparative fit index (CFI), goodness of fit index (GFI), adjusted goodness of fit index (AGFI), normed fit index (NFI), Non-normed fit index (NNFI), root-mean-square-error-average (RMSEA) were used. As shown in table 3, all fit coefficients are at acceptable threshold. proportion of Chi square

**Research Article**

quadrate with degree of freedom is 2.16 and CFI, GFI, AGFI, NFI, and NNFI are all greater than 0.9 and RMSEA is also less than 0.1. this shows that measurement model is valid in terms of validity.

**Table 3. Fit indices of measurement model**

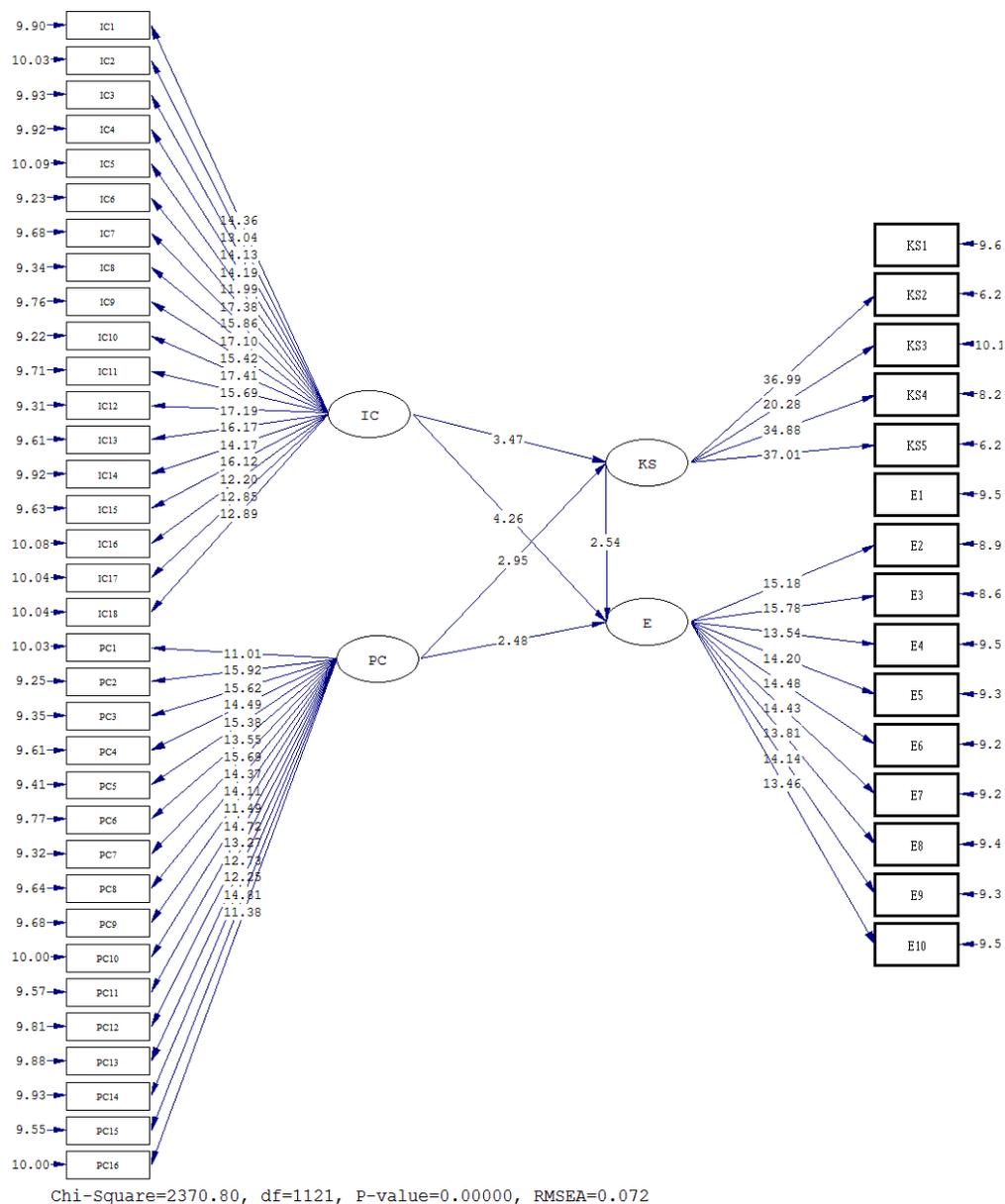
| Fit index  | Acceptable scope | Value | Result |
|--|------------------|-------|--------|
| X2/df (proportion of Chi square quadrate with degree of freedom) | <3               | 2.16  | Proper |
| CFI (comparative fit index)                                      | >0.9             | 0.97  | Proper |
| GFI (goodness of fit index)                                      | >0.9             | 0.96  | Proper |
| AGFI (adjusted goodness of fit index)                            | >0.9             | 0.93  | Proper |
| NFI (normed fit index)   | >0.9             | 0.94  | Proper |
| NNFI (Non-normed fit index)                                      | >0.9             | 0.97  | Proper |
| RMSEA (root-mean-square-error-average)                           | <0.01            | 0.074 | Proper |

Path analysis was used to examine the relationship between variables of the study. According to table 4 it can be said that coefficient of the relationship path between infrastructural capabilities of knowledge and knowledge sharing is 0.24. t statistic for this coefficient is also 3.47, that is, this is a positive relationship with a value higher than meaningfulness threshold which was calculated as 1.96. Therefore it can be said that the relationship between infrastructural capabilities of knowledge and knowledge sharing is meaningful. Other results showed that the value for coefficient of relationship path between infrastructural capabilities of knowledge and organizational effectiveness is 0.30. t statistic for this coefficient is also 4.26, that is, this is a positive relationship, with a value calculated to be above meaningfulness threshold of 1.96. Therefore the relationship between infrastructural capabilities of knowledge and organizational effectiveness is approved. Also, coefficient of relationship path between infrastructural capabilities of knowledge and organizational effectiveness is confirmed. Also, coefficient of relationship path between infrastructural capabilities of knowledge and knowledge sharing is 0.24, and the coefficient of relationship path between knowledge sharing and organizational effectiveness is 0.17. The product of path from infrastructural capability to knowledge sharing and from knowledge sharing to organizational effectiveness equals to 0.04. The figure obtained from summing up direct and indirect relationship is equal to 0.34 (table 4). Regarding that this direct path from infrastructural capabilities of knowledge to organizational effectiveness is 0.30, and considering indirect relationship by knowledge sharing, this relationship has changed (increased), therefore we may conclude that knowledge sharing plays an intermediate role in the relationship between infrastructural capabilities of knowledge management and organizational effectiveness (table 4). Concerning relationship between procedural capabilities of knowledge and knowledge sharing, results showed that the coefficient of relationship path between procedural capabilities of knowledge and knowledge sharing was 0.20. t statistic for this coefficient is also 2.95, that is, this is a positive relationship and its value is above meaningfulness threshold. Therefore, one may state that there is a meaningful relationship between procedural capabilities of knowledge and knowledge sharing (table 4). The relationship between procedural capabilities of knowledge and organizational effectiveness was meaningful, such that coefficient of the relationship path between procedural capabilities of knowledge and organizational effectiveness is 0.17. t statistic for this coefficient is also 2.48, that is, this relationship is positive and its value was above meaningfulness threshold. Also, results showed that analyzing coefficient of relationship path between procedural capabilities of knowledge and knowledge sharing was 0.20, and coefficient of relationship path between knowledge sharing and organizational effectiveness was 0.17. Product of path from procedural capability to knowledge sharing and from knowledge sharing to organizational effectiveness is 0.034, the figure obtained from summing up direct and indirect relationship of the path is 0.204. Regarding that this direct path from procedural capabilities to organizational effectiveness is 0.17, and considering the indirect relationship through knowledge sharing, this relationship has changed (increased). Therefore, we conclude that knowledge sharing plays an intermediate role in the relationship between procedural

**Research Article**

capabilities of knowledge management and organizational effectiveness. According to the model, one may state that coefficient of relationship path between knowledge sharing and organizational effectiveness is 0.17. t statistic for this coefficient is also 2.54, that is, this relationship is positive and its value is above meaningfulness threshold which is 1.96. Therefore the relationship between procedural capabilities of knowledge and organizational effectiveness is confirmed.

According to the analyses made, the conceptual model of the relationship between the variables is as follows (figure 2).



**Figure 1: The conceptual model of relationship between variables at standard estimation mode**

**Research Article**

**Table 4: Results of direct relationship and meaningfulness coefficients**

| Path  | Symbol | Path coefficient | Meaningfulness |
|---|--------|------------------|----------------|
| infrastructural capabilities– knowledge sharing             | IC-KS  | 0.24             | 3.47           |
| infrastructural capabilities - organizational effectiveness | IC-E   | 0.30             | 4.26           |
| procedural capabilities - knowledge sharing                 | PC-KS  | 0.20             | 2.95           |
| procedural capabilities - organizational effectiveness      | PC-E   | 0.17             | 2.48           |
| knowledge sharing - organizational effectiveness            | KS-E   | 0.17             | 2.54           |

**Discussion and Conclusion**

This study aims at examining the relationship between capabilities of knowledge management and organizational effectiveness with regards to mediatory role of knowledge sharing in selected branches of Golestan province Islamic Azad University. Results showed that there was a meaningful relationship between infrastructural capabilities of knowledge and knowledge sharing and organizational effectiveness. Also, knowledge sharing played a mediatory role in the relationship between infrastructural capabilities of knowledge and organizational effectiveness. Other results suggested a meaningful relationship between procedural capabilities of knowledge and knowledge sharing. There was a meaningful relationship between procedural capabilities of knowledge and organizational effectiveness, where knowledge sharing had a mediatory re in the relationship between procedural capabilities of knowledge and organizational effectiveness. Finally, there was a meaningful relationship between knowledge sharing and organizational effectiveness. These findings are in line with results of Smith and Mills (2010), Nasser and Zaied (2012), Munir *et al.*, (2013). For example, Smith and Mills (2010) showed a meaningful relationship between procedural capabilities of knowledge management and organizational effectiveness. Nasser and Zaied (2010) examined the effect of procedural and infrastructural capabilities of knowledge management on performance effectiveness through an intermediate role of knowledge creation, sharing and utilization. The results of their study through structural equations confirmed the findings of this study. Also, Munir *et al.*, (2013) examined the effect of procedural and infrastructural capabilities of knowledge management on organization’s effectiveness through an intermediate role of knowledge sharing. Generally, it is suggested to Azad Universities to increase organization’s effectiveness and to improve the status of knowledge sharing by improving the status of procedural capabilities of knowledge management.

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