



## Promoting Organizational Entrepreneurship in Iran: Evidences from Agricultural Extension Workers

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### Abstract

The main purpose of this study was to investigate the role of Knowledge Management (KM) in Organizational Entrepreneurship (OE) among agriculture extension workers at Kermanshah Township, Iran. The statistical population in this study consisted of all agriculture extension workers of Jihad-e-Agriculture management and centers of agricultural services at Kermanshah Township (N=143), of whom 129 were available and provided data for this study. The main instrument in this study was a questionnaire which its validity was confirmed by the panel of experts and its reliability was established by Cronbach's Alpha coefficient ( $\alpha > 0.70$ ). Data was analyzed by SPSSwin21 software in two parts of descriptive (frequency, percentage, mean and standard deviation) and inferential (correlation and regression analysis) statistics. Based on the results of enter multiple regression, KM components were the main predictors of OE among agriculture extension workers. The findings of this study have applications for Jihad-e-Agriculture management and centers of agricultural services in order to promoting OE among agriculture extension workers in Iran.

### Keywords:

Entrepreneurship, Organizational Entrepreneurship, Knowledge Management, Agriculture Extension Workers

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## INTRODUCTION

Knowledge Management (KM) is considered by some as the business salvation and by others as the "emperor's new clothes" (Martensson, 2000). On the one hand, authors such as Gourlay (2000) and Beckman (1999) present KM as an emerging discipline. According to Belsley *et al.* (1990), the expression was coined for the first time in 1986 by Dr. Karl Wiig who wrote one of the first books on the topic, Knowledge Management Foundations, published in 1993. On the other hand, others, such as Broadbent (1998), Streatfield and Wilson (1999), claim that firms and information professionals have been practicing for years KM-related activities. Streatfield and Wilson (1999) argue that the concept of knowledge is over-simplified in the KM literature, and they seriously question the attempt to manage what people have in their minds. Nevertheless, there is a real interest and enthusiasm in KM as revealed by the increasing number of publications relating to the topic since 1995 (Mahdjoubi and Harmon, 2001).

Attempts to define KM processes are numerous. Nonaka and Takeuchi (1995) described four knowledge conversion processes: socialization, externalization, combination, and internalization. Each process involves converting one form of knowledge (tacit or explicit) to another form of knowledge (tacit or explicit). This model focuses on the important issue of how knowledge may be created through organizational sharing and is useful for identifying and evaluating certain key activities in the management of knowledge. Hlupic *et al.* (2002) refer to Ruggles who identified three main types of activities: knowledge generation involving the creation of new ideas and new patterns; knowledge codification, and knowledge transfer, ensuring exchange of knowledge between individuals and departments. Neither of these process models is broad enough to allow for a complete analysis of organizational knowledge flow, omitting several important steps in the KM chain, such as acquiring and storing knowledge. Another model, proposed by Lawson (2003) outlines six components for the KM chain: knowledge creation; knowledge acquisition; knowledge organizing, knowledge

storage; knowledge sharing and disseminating; and knowledge application. This model covers more completely the range of activities involved in the organizational knowledge flow. It closely resembles information life-cycle processes suggesting again the interrelated aspects of Organizational Entrepreneurship (OE) and KM (Bouthillier and Shearer, 2002).

The organization should know its needs for knowledge and if necessary create it or gain it from outside recourses. Since in today world, work and knowledge consider as two main source for organization performance, so tradition and customs, technology, culture, operation, system and approaches all based on knowledge and expertise. Therefore organizations to increase their abilities to improve goods and services and satisfy their customers need to knowledge. In this situation, they use the organizational technology for KM as main factor for success or failure in the global economy appear speedily. Thus Nonaka and Takeuchi (1995) claimed that ability of organization to create, share and transfer of knowledge is more important, because it create competitive advantages in area of quality, innovation and price. Note that behind all definitions of KM is the strategic need for several organizations and institutions is considered that in the beginning of third millennium. Indeed, what guarantee for long-term success of societies and organizations is the amount use of human, mind and intelligence capital. In this regard, Peter Drucker said creating the new kind of organization in this power of mind replace to power of arm. According to this theory, in the future societies can expect to progress and development that have higher knowledge. Thus, having natural resources not important as knowledge, even organization based on knowledge gain abilities that can with little force produces huge power (Alvani *et al.*, 2007). Hence, we conclude that current speed of changes, cause recognize and prediction of changes not evenly and similarity and past experiences cannot guarantee future success, so we can tell that this current era is the era of lack of continuity and prediction. Ruling paradigm based on modern societies change, guidance organization towards

creating and innovation and we can find this important in its entrepreneurship, therefore each organization that can accommodate with global changes can survive in this roaring sea and move towards coast of survive and progress (Nahid, 2009).

In fact, today's organizations are active in an environment that is characterized by the most rapid and complex changes. Matter how complex the issues are and they need more time to solve them to accommodate with faster rate of change, the more things change and innovative solutions need to solve them. Thus, assuming the existence of stable traditional organizations that have no longer able to meet the needs of today's business world. Therefore, the future of high speed in response to changes in organizations that have the flexibility to implement changes will have on innovation and continuous improvement in its institutional and organizational learning capability is an integral part of it. Formation of these developments in the context of OE is possible. People trying in entrepreneurship organizations supported by senior management and use of resources to innovation in new product development is driven organization and process improvement, innovation, entrepreneurship and the output of the key organizations in its quest for success in the competition, so that the physical resources is not important, but the human resources is very critical for today's organizations (Civi, 2000).

Therefore, today we need investment in the human capital and prepare bed to breed creativity, innovation and entrepreneurship factors, use their brain effectively and knowledge as key factor to development in the era of ICT (Bollinger and Smith, 2001).

Entrepreneurship is an important source of jobs and human creativity in human societies that in one important case Ahmadpourdarani and Moghimi (2006) divided it into two categories: individual and organizational entrepreneurship. Individual entrepreneurship is the case of that one person crate an independent business through identifying opportunities, mobilizing resources and facilities, and its focus on innovation, process development, creating new products or services, but organizational entrepre-

neurship is the process that products services and innovative processes by creating an entrepreneurial culture in an organization can be created.

Therefore, we find that knowledge and OE have important role in changing world and create good opportunities for organizations that understand this subject (Khanbabae and Lajevardi, 2007). Although it show that entrepreneurship have familiar with KM issues, but the review of existing literature in this area suggest that few studies have about the role of KM in OE among agricultural organizations. The agricultural extension organization is one of the most important institutions involved in knowledge creation, storage, and change is in fact one of the main elements of the agricultural knowledge and information system (Pezeshkirad *et al.*, 2011). Also, since Kermanshah Township, with convenient features to develop the agricultural sector (in terms of capacity area) can be seen as an important agricultural hub for development of Iran's economy has the important role in the future (Pourjavid *et al.*, 2011). Hence, human resources development among agricultural extension workers at Kermanshah Township has crucial role in the development of agriculture in this province as an agricultural hub in the country; the more important it becomes necessary.

### Review of literature

In present unstable and complex conditions, innovative organizational, administrative requiring, products and services improve, being an important source of sustainable competitive advantage (Brockman and Morgan, 2003). Innovation, the process of collecting, sharing, and applying knowledge, became the implicit and objective (Hung *et al.*, 2010) and thus that is why an innovative organization, your knowledge is of great relevance for the use of resources (Brockman and Morgan, 2003). KM is an approach to secure the promotion of organizational effectiveness, by enhances organizational knowledge and skills (Gold *et al.*, 2001). Thus the companies that have high levels of KM are able to reaction to changes rapidly and provide new ideas and enhance innovation in products and

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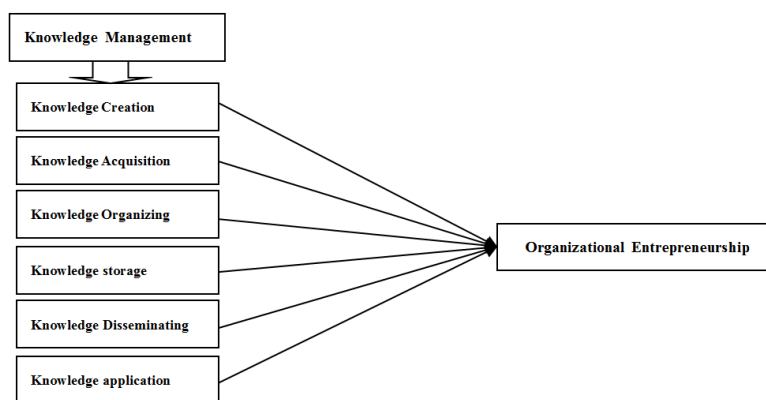


Figure 1: Conceptual Framework

services (Scarbrough, 2003). In fact, effective KM, facilitate relation between knowledge and innovation process and improve innovation by improve views and new abilities (Lakshman, 2009). As mentioned building ideas and innovation, fundamental things to count factors entrepreneurship processes (Barringer and Ireland, 2010). Therefore, it was concluded that KM have critical role in supporting and creating OE.

Several studies including, Krueger (2007) show that 56 percent of entrepreneurial businesses in the first four years of its operation be suffered bankruptcy. In this regard, Nonaka (1994) states the current situation in which the only certainty is uncertainty KM can guarantee organizational success and survive (Madhoushi *et al.*, 2010). In addition, Madhoushi and Sadati (2011) in a prospective study to examine the impact of KM on OE in small and medium-scaled businesses engaged. The researchers found a significant relationship between the knowledge acquisition, knowledge sharing and knowledge application and OE. Finally, the results of their study showed that employing knowledge sharing and knowledge application has directly significant effect on OE. Mary (2004) in the study entitled "Leadership is based on the relationship between KM and organizational culture", the results showed that organizations that have strong KM and organizational culture are strong in acquisition knowledge and information and analyze complex situations. In support of this claim, Smith *et al.* (2006) also believes that the environment has a significant impact on human attitudes towards themselves and others, this type of management dealing with personals, it cause emergence of entrepreneurial

behavior as a vital facilitator. Liebowitz (1999) in their study found a significant relationship between knowledge strategy and entrepreneurship. He believes that one of the key factors for successful KM program is designed to have a clear strategy. In this context, Nazem *et al.* (2010) in a study confirmed the relationship between KM and entrepreneurship. Accordingly, the main purpose of this study was to investigate the role of KM in OE among agricultural extension workers at Kermanshah Township (Iran) and its specific objectives were:

- 1- Identifying the personal characteristics and professional agricultural extension workers at Kermanshah Township;
- 2- Investigating the relationship between KM components and OE among the agricultural extension workers at Kermanshah Township;
- 3- Determining the effects of KM components on OE among the agricultural extension workers at Kermanshah Township.

### Conceptual framework

As mentioned, little research carried out that studied the role of KM in OE among the agricultural organization such as agricultural extension workers. Hence, in this study we investigated the role of KM in OE among the agricultural extension workers at Kermanshah Township, Iran. Accordingly, the conceptual framework was developed based on review of literature and purposes (Fig. 1).

### MATERIALS AND METHODS

This study was quantitative in nature and applied in purpose. The statistical population

Table 1: The relationship between KM components with OE

KM components	Correlation coefficient (r)	p-value
Knowledge Disseminating	0.848**	0.000
Knowledge Creation	0.804**	0.000
Knowledge Acquisition	0.786**	0.000
Knowledge Storage	0.772**	0.000
Knowledge Organizing	0.679**	0.000
Knowledge Application	0.567**	0.000

\*\* p&lt;0.01

for this study consisted of all agricultural extension workers of Jihad-e-Agriculture management and centers of agricultural services at Kermanshah Township (N=143) that all of them were selected by census method and of them 129 workers responded to the questionnaire. The main instrument of this research was a questionnaire, which consisted of three parts: (a) personal and professional characteristics of the agricultural extension workers; (b) knowledge management; and (c) organizational entrepreneurship. In the second and third parts of the questionnaire we adapted the scale's Lawson (2003) and scale's Julie (2005), respectively. The 24 items about KM comprised items addressing the knowledge creation (4 items), knowledge acquisition (4 items), knowledge organizing (4 items), knowledge storage (4 items), knowledge disseminating (4 items) and knowledge application (4 items) (Lawson, 2003). The 25 items about OE comprised items addressing the entrepreneurial orientation (7 items), and entrepreneurial management (18 items) (Julie, 2005). The statements of questionnaire were each rated by respondents using a five step Likert scale (from 1=entirely agree, to 5=entirely disagree). In order to refine the content of the questionnaire there has been some reformation based on the viewpoints of some professors and Ph.D. students of agricultural extension and education and entrepreneurship at Razi University (Iran), and also there has been some other reformation of the items of the questionnaire regarding the consideration of respondent comprehensibility in the pilot stage of this research. In order to confirm the internal consistency of the instrument of the research the Cronbach's alpha coefficient was determined. To analyze

the data by both descriptive (frequency, percentage frequency, mean and standard deviation) and inferential (correlation and regression analysis) statistics SPSSwin21 was applied.

## RESULTS

### Personal and professional characteristics of the agricultural extension workers:

The mean age of the agricultural extension workers in this study is 37.97 years (SD=10.53) and their work experience mean is 15.56 years (SD= 9.64). The majority of the agricultural extension workers were men (73.2%) and 32 of them (27%) were women. The majority of respondents are married (65.4%) and only 43 of them (34.6%) were single. The educational level of the majority of the agricultural extension workers were B.Sc. (78.3%), and only 19 were M.Sc. (8.5%). The majority of respondents had graduated with an agricultural major (69.8%) and 31 people (24%) had graduated from other majors.

### The relationship between KM components and OE:

Pearson correlation coefficient was used to study the relationship between KM components and OE among agricultural extension workers. The results from Table 1 revealed that KM components, i.e. knowledge creation, knowledge acquisition, knowledge organizing, knowledge storage, knowledge disseminating and knowledge application had positive and significant correlation with OE among agricultural extension workers. In other words, it can be stated that the increase or decrease in the amount of KM components among agricultural extension workers the amount of OE among them also increase and decrease.

### Determining the effects of KM components on OE:

Enter multiple linear regression is a valuable method used to model the linear relationship between a dependent variable and some independent variables (Dong *et al.*, 2008). As a second step, enter multiple linear regression and partial coefficient ( $R^2$ ) were used to determining the effects of KM components as independent variables on OE as dependent variable by fitting a linear equation to the observed data. The results indicated that the predicting model equation for OE is formulated by using KM components as follow:

$$OE = 0.439 + 0.109X_1 + 0.108X_2 + 0.135X_3 + 0.208X_4 + 0.201X_5 + 0.155X_6$$

The statistical model developed by enter multiple regressing explained 91.8% ( $R^2 = 0.918$ ) of the total variation within the OE while the remaining 8.2% probably be due to residual effects. Analysis of variance (ANOVA) for this model was shown in Table 2. When all measured variables were present in the prediction model by enter multiple regression, ANOVA showed that the model was high significant ( $F = 21.32^{**}$ ,  $p < 0.01$ ).

On the other hand, t-test and standardized coefficients ( $\beta$ ) calculated for all variables separately (Table 2). The results from Table 2 revealed that all KM components significantly contributed to the model at the 1% of probability; so, it can be said that all KM components were important to be presented in modeling of OE. Furthermore, to determine the relative importance of independent variables, Standardized coefficient ( $\beta$ )

should be considered. This statistics shows the effect of each independent variable separately from the effects of other independent variables on the dependent variable (Shiri *et al.*, 2013). Accordingly, the most influential independent variable on the dependent variable (OE), was the knowledge storage variable with  $\beta = 0.303$ . This means that a unit change of standard deviation of the knowledge storage variable, explain 0.303 of unit change in standard deviation of the OE. Other important variables influenced the dependent variable were: the knowledge disseminating with  $\beta = 0.265$ , the knowledge application with  $\beta = 0.191$ , knowledge organizing with  $\beta = 0.176$ , knowledge acquisition with  $\beta = 0.159$ , and the knowledge creation with  $\beta = 0.132$ .

In an ideal model, independent variables should not be related among themselves, commonly known as the problem of multi co-linearity, as indicated by their respective values of variance inflation factor (VIF), being above 10 (Hasheminasab *et al.*, 2014). VIF and tolerance index showed that there was not multi co-linearity among variables and the coefficients determined by this model probably are the best values (Table 2).

The residual from the regression model were plotted to demonstrate assumption violations (Hasheminasab *et al.*, 2014). Normal plot and normal distribution histogram of the standardized residuals are shown in Fig. 2. The normal plot of the residuals in Fig. 2 (A) had a straight-line appearance. Also histogram with normal overlay of the distribution of the residuals showed that the measurement errors in the dependent variable (OE) were normally distributed (Fig. 2 B).

Table 2: The results of enter multiple regression analysis

independent variable	b	S.E.	$\beta$	t	Tolerance	VIF
Constant	0.439	0.116	-	0.79**	-	-
Knowledge Creation ( $X_1$ )	0.109	0.037	0.132	2.92**	0.33	3.01
Knowledge Acquisition ( $X_2$ )	0.108	0.030	0.159	3.57**	0.33	2.94
Knowledge Organizing ( $X_3$ )	0.135	0.029	0.176	4.67**	0.47	2.10
Knowledge Storage ( $X_4$ )	0.208	0.027	0.303	7.78**	0.44	2.26
Knowledge Disseminating ( $X_5$ )	0.201	0.034	0.265	5.83**	0.32	3.06
Knowledge Application ( $X_6$ )	0.155	0.025	0.191	6.21**	0.71	1.40

\*\*  $p < 0.01$  R = 0.958  $R^2 = 0.918$  F = 21.32 p-value(F) = 0.000

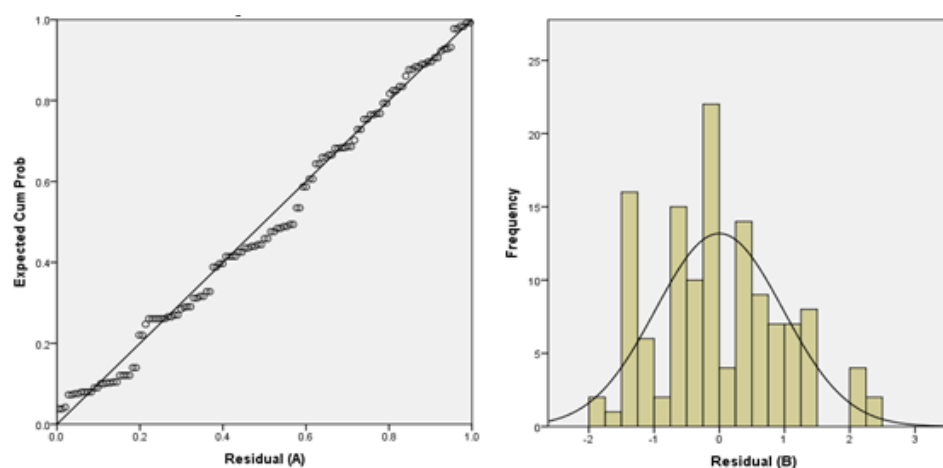


Figure 2: Normal plot (A) and normal distribution histogram (B) of the standardized residual for predicting organizational entrepreneurship

These results indicated goodness of the model for predicting OE using selected variables.

## DISCUSSION AND CONCLUSION

This research was conducted to study the role of KM in OE among agricultural extension workers at Kermanshah Township. Based on the findings from the correlation analysis determined that there is a positive and significant correlation between all KM components (i.e., knowledge creation, knowledge acquisition, knowledge organizing, knowledge storage, knowledge disseminating and knowledge application) with OE among agricultural extension workers at Kermanshah Township. So that knowledge disseminating component has the highest correlation and knowledge application has the lowest correlation with OE among agricultural extension workers. This findings is corresponds with previous studies, such as Liebowitz (1999) and Nazem and Karimzadeh (2010).

Based on the results of the multiple regression method was found to have positive and significant effects of KM components very high on the OE among agricultural extension workers at Kermanshah Township; so that the partial coefficient is 0.918, meaning that 91.8% of the variance of OE predicting by KM components among agricultural extension workers. In addition, based on the results of the multiple regression analysis indicated that important components influenced the OE were: knowledge storage, knowledge disseminating, knowledge application, knowledge

organizing, knowledge acquisition, and knowledge creation. These finding can be dovetailed with of the studies such as, Smith *et al.* (2006), Jong and Hartog (2007), Madhoshi and Sadati (2011) and Ghorbani *et al.* (2012). Thus, it can be stated that the KM components plays an important role in promoting and developing OE among the agricultural extension workers. So can use these funds to improve and promote OE among agricultural extension organization and other organizations.

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