ENTREPRENEURIAL ORIENTATION AND ITS EFFECTS ON KNOWLEDGE MANAGEMENT CAPABILITY AND ORGANIZATIONAL EFFECTIVENESS: THE TAX ADMINISTRATION EMPLOYEES PERSPECTIVE

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ABSTRACT

Objective: This study aimed to determine the effects of entrepreneurial orientation (EO) on knowledge management and organizational effectiveness from the point of view of the employees of Tabriz tax Administration (2013-2014). In terms of aim, this is an applied research while it is a correlational descriptive study in terms of data gathering and analyzing methods. The study population included all the staff employed in 2013-14 in Tabriz Tax Administration (n=182, 30 females, 152 males) where 124 of them were selected using stratified random sampling method. The researcher used a questionnaire to measure the variables of the study in which entrepreneurial orientation and knowledge management was measured by evaluating their indicators reviewing the questionnaires of both domestic and foreign scholars. Organizational effectiveness was evaluated using standard Organizational Effectiveness Survey (OES) (Parsons’ four functional imperatives). Cronbach’s Alpha was used for reliability of the tool. The reliability for the questionnaires of the entrepreneurial orientation, knowledge management and organizational effectiveness were respectively 0.80, 0.85 and 0.95. Analysis of these three variables showed that from the employee's point of view knowledge management, entrepreneurial orientation and organizational effectiveness were medium in Tabriz Tax Administration. Second the correlation showed significant positive relationship between all domains of entrepreneurial orientation and knowledge management, all domains of knowledge management and organizational effectiveness and also all domains of entrepreneurial orientation and organizational effectiveness. According to the results of regression analysis entrepreneurial orientation has the largest beta coefficient (0.39) in organizational effectiveness which makes the strongest contribution in explaining the criterion variable. Path analysis indicated that entrepreneurial orientation predicted the most variance in organizational effectiveness.

Keywords: Entrepreneurial Orientation, Knowledge Management, Organizational Effectiveness

INTRODUCTION

The rapid changes and increased complexity of today's world require organizational agility and flexibility as a critical success factor obtained through the knowledge acquisition. Knowledge is the unique vital and imitable resources creating competitive advantages for organizations (Greiner et al., 2007). Nowadays almost all of the companies and organizations have realized the advantages of knowledge in our world. Clearly tangible assets will be decreased or consumed because of use but knowledge and information assets will grow through sharing (Davenport and Prusak, 2000). The important of knowledge and its applications have been discussed in different dimensions, for example it is considered as an instrument for the comprehensive implementation and fair distribution of income from the viewpoint of sociologists it has been discussed as the key feature of stability, success and consistent competitive advantages from the perspective of organization and management and in economics, it has been adverted as a strategic asset (Niaz and Amuei, 2007) so that economics have been transformed into a knowledge based economic in which knowledge is considered as the pivotal source prior to other elements of natural resources or capital in the industrial economics the intangible properties services and brands are the factors more important than explicit properties for the modern organizations' success world is a network advocated by...
Communicative technologies and makes it feasible for knowledge to be passed across the borders (Cantner, 2009). In the meantime, development of entrepreneurial orientation among employees has principal effect on the organizational innovation and supports these processes. In another words, to achieve effective knowledge management organizations need the risk-taking individuals with creative thinking. Benefiting from knowledge management approaches, they also can provide innovation in activities, procedures, products and services thereby improve their competitive position. Currently organizations must acquire the knowledge needed for innovation in products and process improvement, disseminate it among the staff and apply in their daily activities. Indeed knowledge management is defined as sharing knowledge among the employees used as a means to achieve innovation in processes, products and services as well as effective decision-making and compliance with the environment and competitive market (Alvani \textit{et al.}, 1997). Entrepreneurship can be referred as the process of creating innovative ideas, taking advantages of opportunities with reliance of knowledge and career guidance and related jobs and also risk taking (Rahimi, 2001).

Entrepreneurial orientation is the key concept in modern societies and organizations that generally inspires the people to involve in knowledge-based activities (Hunt and Arnett, 2006). Birth and death of an organization depends on the insight and capacities of its funders. Besides, human resource abilities, creativity and innovations are critical for growth and survival of it. Entrepreneurial planners, decision makers and practitioners achieve a better understanding of economic opportunities and take better advantage of the resources available for innovation initiatives. So they grow faster and survive the competition. Therefore in order to accomplish this, entrepreneurial activity must be promoted and the employees and decision makers must have entrepreneurial sprits so that an entrepreneurial environment be establish within organization (Hadizadeh \textit{et al.}, 2004). Learning and innovation can be essential to an effective organization's survival. Thus most of them are seeking innovative methods to improve efficiency and effectiveness and flexibility. In this regard, corporate entrepreneurship is quickly becoming a weapon for many companies. Corporate entrepreneurship is an attempt to take both the mindset and skill set demonstrated by successful start up entrepreneurs and indicate these characteristic into the cultures and activities of a company (Haghshenas, 2007).

According to the findings of the surveys on entrepreneurial and entrepreneurial orientation the main dimensions of the entrepreneurial orientation, risk-taking, innovativeness and proactiveness, have positive impact on creation, acquisition and transfer of knowledge as well as effectiveness and performance improvement of the organization. Therefore in the present survey we investigate the effects of entrepreneurial orientation on knowledge management and organizational effectiveness from the view of employees of Tabriz Tax Administration. This study aimed to answer the following questions:

1) How are entrepreneurial orientation, knowledge management and organizational effectiveness determined at Tabriz Tax Administration?

2) Is there any relationship between entrepreneurial orientation and knowledge management or organizational effectiveness?

3) Which of the two components, knowledge management and entrepreneurial orientation, predicts organizational effectiveness?

\textbf{MATERIALS AND METHODS}

\textbf{Methods}

This study focuses on the scientific theories on entrepreneurial orientation and knowledge management and their effectiveness and also contributes to practical knowledge and about the relationship between variables. Therefore in terms of aim, this is an applied research while it is a correlational descriptive study in terms of data gathering and analyzing methods. The study population included all the staff employed in 2013-14 in Tabriz Tax Administration (n=182, 30 females, 152 males). Using Cochran formula, sample size was estimated 124 cases (21 females and 103 males). The sampling technique used here was stratified random sampling method and data was analyzed using SPSS, Amos, and descriptive statistics of mean, standard deviation, Pearson correlation coefficient and path analysis. The survey consisted of three
questionnaires on entrepreneurial orientation, knowledge management and organizational effectiveness. This researcher-made scale has three components (risk-taking, innovativeness and proactiveness) which were based on an inventory developed by (Dess and Lumpkin, 2005). The knowledge management questionnaire have 16 questions in 5-point Likert scale which were based on the tool developed by (Lee and Choi, 2004) and also, reference researches in this area. Organizational effectiveness scale was based on Parsons’ four-function model consisting 28 items and each of them was scored on a 5-point scale. The results of Cronbach’s alpha showed that reliability of the questionnaire were (respectively) 0.80, 0.85 and 0.95 for the, respectively, entrepreneurial orientation, knowledge management and organizational effectiveness scales.

Given the main objective of the present research, effects of entrepreneurial orientation (EO) on knowledge management and organizational effectiveness and also research questions the overview of the framework is provided in Figure 1 below.

![Figure 1: The conceptual model of research](image)

**RESULTS AND DISCUSSION**

**Results**

The demographic characteristics of the study indicated that 83% and 17% of the subjects were (respectively) male and female, 26 had high school diploma or associate’s degree (21%), 78 baccalaureates (61.9%), 18 M.S degree (14.6%) and 2 had PhD degree. Among the participants 11 subjects had one to ten years work experience (8.9%) while 37 and 58 ones respectively had 11-20 and more than 21 years work experience (respectively, 29.8% and 46.8%).

**Question 1:** How are entrepreneurial orientation, knowledge management and organizational effectiveness determined at Tabriz Tax Administration?

<table>
<thead>
<tr>
<th>Row</th>
<th>Variables</th>
<th>No. of questions</th>
<th>Mean</th>
<th>Status</th>
<th>Gorman classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>entrepreneurial orientation</td>
<td>36</td>
<td>3.16</td>
<td>Medium</td>
<td>More than satisfactory</td>
</tr>
<tr>
<td>2</td>
<td>knowledge management</td>
<td>16</td>
<td>3.02</td>
<td>Medium</td>
<td>More than satisfactory</td>
</tr>
<tr>
<td>3</td>
<td>organizational effectiveness</td>
<td>28</td>
<td>3.20</td>
<td>Medium</td>
<td>More than satisfactory</td>
</tr>
</tbody>
</table>

Regarding Table 1, the levels of these 3 variables were satisfactory that, according to Gorman classifications, was ranked as "more than satisfactory". Indeed the staff of Tabriz Tax Administration perceived these variables; the highest and lowest means were for respectively organizational effectiveness and knowledge management.

**Question 2:** Is there any relationship between entrepreneurial orientation and knowledge management or organizational effectiveness?
Table 2: Pearson correlation text results (entrepreneurial orientation and knowledge management)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Entrepreneurial orientation</th>
<th>Knowledge management</th>
<th>Organizational effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>entrepreneurial orientation</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>knowledge management</td>
<td></td>
<td><strong>0.50</strong></td>
<td></td>
</tr>
<tr>
<td>organizational effectiveness</td>
<td></td>
<td><strong>0.51</strong></td>
<td><strong>0.49</strong></td>
</tr>
</tbody>
</table>

The results of Table 2 show positive significant relationship between entrepreneurial orientation and knowledge management ($r=0.5$, $P=0.01$). The relation between knowledge management or organizational effectiveness and also between entrepreneurial orientation and organizational effectiveness were respectively 0.49 and 0.51 percent.

**Question 3:** Which of the two components, knowledge management and entrepreneurial orientation, predicts organizational effectiveness?

A stepwise multiple regression analysis method was used to evaluate this question.

Table 3: Variables entered / removed in a regression model

<table>
<thead>
<tr>
<th>Model</th>
<th>Variables entered (predictors)</th>
<th>Variables removed</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>entrepreneurial orientation</td>
<td>_</td>
<td>Stepwise</td>
</tr>
<tr>
<td>2</td>
<td>knowledge management</td>
<td>_</td>
<td>Significance level for entering variables $P \leq 0.05$</td>
</tr>
</tbody>
</table>

**Criterion Variable: organizational effectiveness**

According to Table 3, knowledge management variable of these predictors entered into entrepreneurial orientation regression.

Table 4: Summary of Multiple Regression Analysis

<table>
<thead>
<tr>
<th>Model</th>
<th>$R$</th>
<th>$R^2$</th>
<th>Adjusted $R^2$</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.54</td>
<td>0.29</td>
<td>0.28</td>
<td>22.20</td>
</tr>
<tr>
<td>2</td>
<td>0.59</td>
<td>0.35</td>
<td>0.34</td>
<td>21.24</td>
</tr>
</tbody>
</table>

1. Predictor variable: entrepreneurial orientation
2. Predictor variables: entrepreneurial orientation, knowledge management

Criterion variable: organizational effectiveness

Table 5: ANOVA test for model 2 regression significance

<table>
<thead>
<tr>
<th>Sources of variation</th>
<th>Sum of squares</th>
<th>df</th>
<th>Mean square</th>
<th>$F$</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>30482/181</td>
<td>2</td>
<td>15241/090</td>
<td>33/75</td>
<td>0.001</td>
</tr>
<tr>
<td>Remained total</td>
<td>54639/005</td>
<td>121</td>
<td>451/562</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>85121/185</td>
<td>123</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Predictor variables: entrepreneurial orientation, knowledge management**

Regarding Table 4, the correlation coefficient between variables entrepreneurial orientation and knowledge management and, also, organizational effectiveness was $R=0.59$ that is about 34% of the
variance or individual differences in organizational effectiveness related to the both entrepreneurial orientation and knowledge management. In this research the second model explained about 34% of the criterion variable. In the first phase by entering entrepreneurial orientation variable, the squared correlation was 0.29 explaining 38% of organizational effectiveness variance. Based on the results of table 4-19 the second model was chosen as the final model due to high explanatory power (R² = 0.35).

Both variables entered in the regression model significantly contributed to the prediction of criterion variable (F₄,₁₂₃=33.75, P<0.001) as the table 5 displayed.

### Table 6: Table of regression coefficients, model 2 (entrepreneurial orientation and knowledge management)

<table>
<thead>
<tr>
<th>Model 4</th>
<th>Non-standard coefficient regression (β)</th>
<th>SE</th>
<th>Standard coefficient regression(B)</th>
<th>t</th>
<th>Significance level</th>
<th>Tolerance value</th>
<th>Variance bias</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant value</td>
<td>5.04</td>
<td>10.48</td>
<td>0.48</td>
<td>0.63</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>entrepreneurial orientation</td>
<td>1.34</td>
<td>0.291</td>
<td>0.29</td>
<td>4.62</td>
<td>0.001</td>
<td>0.74</td>
<td>1.35</td>
</tr>
<tr>
<td>knowledge management</td>
<td>0.68</td>
<td>0.197</td>
<td>0.29</td>
<td>3.48</td>
<td>0.001</td>
<td>0.74</td>
<td>1.34</td>
</tr>
</tbody>
</table>

**Criterion variable: organizational effectiveness**

**Predictor variables: entrepreneurial orientation, knowledge management**

![Image of relational model between Knowledge management and entrepreneurial orientation against organizational effectiveness](image-url)
Regarding the results in table 6 EO and KM are positive, significant predictors of organizational effectiveness. The regression equation of estimating organizational effectiveness is as follow: knowledge management $\times (0.29) + EO \times (0.39) = $Organizational management

The results of regression show that EO has the largest beta coefficient 0.39 for organizational effectiveness that has a strong contribution for explaining the criterion variable. Finally we examine the structural model proposed by authors.

Path analysis model of knowledge management and entrepreneurial orientation against organizational management.

Figure 2 shows the standardized coefficient of the question. Each of the routes has coefficient standard parameter with corresponding t-values. These coefficients and indicators indicate the relative strengths of the routes. According to the findings all of them are statistically significant ($P<0.01$). The estimated path coefficients are significant, too, according to analyst estimates and comparing to knowledge management entrepreneurial orientation predicts the greatest variance in effectiveness.

Table 7: Goodness-of-fit indexes

<table>
<thead>
<tr>
<th>$X^2$</th>
<th>df</th>
<th>$X^2$/df</th>
<th>Significance level</th>
<th>Normalized fit index</th>
<th>Goodness of fit indexes</th>
<th>Root-mean square error of approximation (RMSE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>46.85</td>
<td>41</td>
<td>1.14</td>
<td>0.01</td>
<td>0.94</td>
<td>0.93</td>
<td>0.034</td>
</tr>
</tbody>
</table>

The purpose of the designed model is to investigate the direct relationship between knowledge management and organizational management, between entrepreneurial orientation and organizational management and also entrepreneurial orientation and knowledge management. According to table 4-22 the overall indicators of structural equation model test suggested overall fit of the pattern and model ($df=41$, $X^2=46.85$, $RSMEA=0.034$, $GFI=0.93$, $AGFI=0.89$, $NFI=0.94$, $CFI=0.99$). In order to fit the model indicators should meet the criteria. When $X^2$/df<3 and RSMEA<0.1 and close to zero and also when fit indices of GFI, AGFI, NFI and CFI are close to 1 then it meant adoption of the predictive models. Therefore the indicators in table 4-22 included the relevant criteria thus it can be acknowledged that the proposed models in this study have been adopted.

**Discussion and Conclusion**

Currently, entrepreneurship plays a key role in the competitive, market-based economy. In other words, in the dynamic economics ideas, products and services are constantly changing and entrepreneurs plan models for coping with and adoption to new conditions (Nahid, 2009). An organization with high entrepreneurial orientation that uses innovation and creativity in application of knowledge would be more effective course of action. As a new phenomenon in economic history, entrepreneurship plays a vital role in the economic development of countries. In uses its resources and knowledge to address the problems and deals effectively with external threats and aimed at achieving the goals of the organization (Bennis and Shin, 2002).

Our study focused on the effects of entrepreneurial orientation (EO) on knowledge management and organizational effectiveness from the point of view of the employees of Tabriz tax Administration. The results of the first research question indicated that the perception of the employees towards entrepreneurial orientation, knowledge management and organizational effectiveness was average and it had an entrepreneurial structure and can foster creativity, innovation and entrepreneurship then they should primarily reconsider their organizational structure.

The study by (Abbaszadeh et al., 2012), "The model of entrepreneurial orientation in banking industry of Iran", suggests that risk-taking, innovativeness and creativity in this system are at the appropriate level. According to a study by (Koozechian et al., 2010) the mean of organizational effectiveness and entrepreneurial structure are in intermediate level which is not consistent with the results of a study by (Moghimi, 2004). The main barriers identified in his study were: inequality and ambiguity of authority and managers' responsibilities, the policy of strict observance of the hierarchical orders, regulatory compliance instead of organizational goals.
Research Article

Finding of a study on the status of knowledge management application in librarians of Isfahan university of medical sciences by Mohammadi Ostani suggested that most of the components depicted in Bukowitz and William's model were lower than average. Knowledge management is an essential ingredient of human resources of organizations developing a competitive environment. Taking advantage of this trend organizations can gain benefit including saving development costs and increase capabilities and job satisfaction as well as maintaining competitive environment, etc (Foo et al., 2002). Ghasemi (2012) describes that the knowledge creation and maintenance constitutes in police are higher than average.

Results evaluating the second research question indicate positive significant relationship between knowledge management and effectiveness. Then the more entrepreneurial orientation, the more organizational effectiveness that is consistent with the findings of a study by (Sanjagi, 2013) suggested a quite direct and strong relation between organizational performance and entrepreneurial orientation (0.88). (Mehdivand and Zaali, 2011; Ranian et al., 2006) confirm a direct effect among them, too (standard coefficient= 0.39) that is consistent with these studies.

The results of a survey by Gupta showed a positive and significant relation between risk-taking and knowledge acquisition, significant positive relation between innovativeness and knowledge acquisition and also between innovativeness and knowledge creation. They also revealed a significant positive impact of risk-taking and innovativeness on knowledge acquisition and creation (Gupta, 2008). Yuan et al., (2009) show that under China's transition economy the positive relationship between intra firm knowledge sharing and a firm's innovation is mediated by knowledge application (Yuan, 2009). Yuan states that knowledge creation process plays the role of intermediate variable to mediate the relationship between entrepreneurial orientation (innovativeness) and performance. Therefore there is positive relation between innovativeness and knowledge acquisition (Yuan, 2008). Gupta believed that productive personality was positively and significantly associated with knowledge acquisition and positively affect it (Gupta, 2008).

Given the third research question, entrepreneurial orientation has the largest beta coefficient 0.39 for organizational effectiveness and was the strongest predictor to explain the criterion variable. Results of the study conducted by (Koozechian et al., 2010) revealed direct significant relation between entrepreneurial structure and all its dimensions with organizational effectiveness.

Gupta's research suggests that entrepreneurial orientation has a positive significant impact on knowledge management practices (creation and acquisition) (Gupta, 2008).

Y-Hui believed that a direct association exists between entrepreneurial orientation and company performance and knowledge creation process plays the role of intermediate variable to mediate the relation between them (Y-Hui et al., 2008).

Under China's transition economy the positive relationship between intra firm knowledge sharing and a firm's innovation is mediated by knowledge application. Intra firm sharing facilitate application of knowledge in organization that has positive association with EO mediator (Yuan et al., 2009).

The results of the model showed that all paths were significant. Comparing to knowledge management, entrepreneurial orientation had the greatest variance in effectiveness. Public sectors are usually depicted as exclusive, conservative and bureaucratic that leads to conclusion that they cannot be entrepreneurs. Public sectors are not inconsistent with entrepreneurship but the structures, bureaucracy, traditional methods and values are harmful to it (Haghshenas, 2007). The overall review of the work process indicates that Iranian government organizations are traditional and non-entrepreneurial in nature. Indeed one of the main reasons for the ineffectiveness of government agencies in Iran stems from lack of innovation and corporate entrepreneurship. Pathology of administrative system of our country suggests that it is a bureaucratic system that suffers from dangerous complications such as lack of participation and involvement of the staff, centralization and rigidity, delay in executing tasks and complexity of the duties, official indifference towards the results, irresponsibility and projection, low productivity and inefficiency (Alvani, 2007).

In summarizing the overall findings of this study and other reports recommend that the present bureaucratic structure of our organizations must be replaced by an entrepreneurial one that increase the
effectiveness and provides capabilities needed to achieve organizational goals and implement the missions. It also should be said that the study of entrepreneurial orientation is in early stage development and further research in this area is ongoing. So conceptual and methodological uncertainties will considered normal. Given the importance of entrepreneurship and its dramatic impact on development of societies, students, faculty members and researches should design more studies in this field. However, much more researches need to be done on this topic to resolve doubts and ambiguities and will contribute to the promotion of entrepreneurship in the society at large and development and progression of the country in particular. Solving problems in the future should be depends on the tools and capabilities we will have, not on the traditional ways.

**Practical Suggestions**

1) Organizational factors can have a considerable influence on entrepreneurial orientation and environmental agents strengthen or weaken the influence of organizational ones, then to help to promote entrepreneurialism a proper set of organizational factors must be aligned including support from senior managers, constructive communication, decentralization and informality, having an appropriate reward system as well as cultural, economic, political factors and values of society.

2) Training courses should be organized in accordance with the requirements aimed to enhance knowledge and awareness among the employees and managers. It is recommended to prioritize the training courses that can help the employees in this job and knowledge skills.

3) Learning groups should be established in organizations in which they discuss about knowledge creation.

4) Problems, failures and hidden doubts should be discussed openly within the organization and look for solution.

5) Staff should be encouraged to express their ideas and opinions about organization management and effective use of constructive comments in the organization's planning process.

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Research Article

