

# The Effect of Entrepreneurship Orientation on Learning Orientation and Innovation: A Study of Small-Sized Business Firms in Iran

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**Abstract**—In the world where the only thing one can trust in is lack of confidence, for organization to this wavy environment, they need innovation, which by itself has a central role in moving toward the comparative advantage and supreme performance. Although many researches have investigated the effect of innovation on firm's performance, it seems that the research literature of the country is facing lack of applicable studies with respect to the effect of entrepreneurship orientation on learning orientation and innovation in general and the effect of learning orientation on innovation of small firms in particular.

Examining 82 small firms of Tehran with the aim of filling the gap existing in the research literature of the country, the present article shows that entrepreneurship orientation has significant and positive effect on organization's commitment to learning, open-mindedness and shared vision of small firms. Moreover, the results obtained from the regression analysis are indicative of the existence of significantly positive relationship between organization's commitment to learning, open-mindedness and shared vision and innovation of small firms.

**Index Terms**— Entrepreneurship Orientation, Innovation, Learning Orientation, Small Firms.

## I. INTRODUCTION

The recent years' ever-increasing intensity of competition in world markets, speed of globalization and quick development of technology has led innovation to be taken into account as an inevitable necessity for any firm. Therefore, for commercial organizations to be successful and to obtain stability in competitive advantage, they should not only seek for finding new opportunities, but also to concentrate on the development of products and markets (Tajeddini, Trueman and Larsen, 2006).

The ever-increasing attention of firms to innovation originates from the critical role this factor plays in acquiring the stable competitive advantage (Gürol and Atsan, 2006; Liao, Fei and Liu, 2008). Actually, this is because innovation, in addition to developing firm's capabilities (Schindehutte, Morris and Kocak, 2008), enables it to correspond with environmental changes, and thus is necessary for an

organization to have a long-lasting life (Collins and Moschler, 2008; Rhee, Park and Lee, 2009).

That is why learning is observed as a stimulus that can increase the capacity of a firm's innovation (Calantone, Cavusgil and Zhao, 2002; Hult, Hurley and Knight, 2004). In other words, it is the process of learning through which innovation is directly promoted (Hunt and Morgan, 1996). Actually, through the extension of learning or the spreading of a new vision in organization (Hult, Hurley and Knight, 2004), in addition to increasing the ability to perform new ideas, processes or products, and also creating the capacity of innovation in organization (Hurley and Hult, 1998), the learning process leads to increase in the efficiency of developing a new product, marketing and the technological synergy between the new product and the existing advantages of firm (Brockman and Morgan, 2003).

In general, for a firm to create and maintain learning orientation which is considered as a culture supportive of innovation, it needs to adopt a suitable strategic approach. Actually, this approach can lead to increase in innovative behaviors and capabilities, in addition to supporting a learning culture in organization. That is why entrepreneurship orientation can, as a strategic approach in the literature of management, affect learning orientation in organization (Wang, 2008), and as the primary motivation for learning orientation in organization, it is capable of promoting organizational learning (Slater and Narver, 1995).

Moreover, entrepreneurship orientation is the most important factor that provides the knowledge related to innovation and supreme performance (McGrath, 2001), and as one of management necessities, while challenging bureaucracy, encourages innovation (Barringer and Bluedorn, 1999). That is why entrepreneurship is considered as the first step in understanding innovation (McGrath, 2001; Stevenson and Jarillo, 1990) and plays the key role in firm's competitive advantage (Lumpkin and Dess, 1996).

Although many studies have in the past been done examining the effect of innovation on commercial performance of firms, relatively few of these studies have been directed to recognize the dimensions and factors stimulating innovation, especially in the developing countries. In this case the role of entrepreneurship orientation, as the attitudes and deeds that increase organizational capabilities to accept risk, use opportunities and innovation (Zahra, 1995), and also the role learning orientation plays in the creation and development of knowledge for innovation (Huber, 1991; Hurley and Hult, 1998) are of specifically high

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importance. Therefore, considering the importance of this strategic area in the research literature, the present paper is intended to explain the effect of entrepreneurship orientation on learning orientation and innovation of small firms of Iran. While having a share in the research literature, the theoretical foundations discussed in this area provides other researchers and managers with suitable and convenient tools.

## II. ENTREPRENEURSHIP ORIENTATION

Entrepreneurship, being developed by Morris and Paul (1987) and Covin and Slevin (1991), can be considered as an important human factor to obtain competitive advantage. As a matter of fact, it is a stimulating force the role of which is to find the opportunities that are still not used in market and is trying to create a new balance in market (Elenurm, Ennulo and Laar, 2007). It is also considered as a motor to develop economics, create job and reform society (Gürol and Atsan, 2006).

To Schumeter (1949), entrepreneurship is more related to new dealing ideas that may cause some changes in the nature of market. Moreover, according to Kirzner (1978), entrepreneurship means the pursuit of opportunities, the ability to recognize the gaps existing in market and also the exploration of mistakes done by other entrepreneurs. Actually, entrepreneurship orientation is an approach the focus of which is on the innovation in market- product and risky projects, and having tendency to be the pioneer of innovation, it is trying to find superiority over rivals (Miller, 1983).

Entrepreneurship culture supports the creation of new dealings form the existing ones and the revival of sluggish dealings (Schendel, 1990). In fact, the creation and revival of dealings can result from the development of new product, transformation of the existing products, creation of new producing methods or new distribution channels, and finding new management attitudes or new competitive strategies (Stevenson and Jarillo, 1990).

Moreover, being a technological viewpoint that increase the ability of firm, and through the provision of technical knowledge, entrepreneurship orientation make it possible to present technical solutions for satisfying the needs of consumers (Gatignon and Xuereb, 1997; Workman, 1993). By presenting suggestions for testing potentially new opportunities, through getting access to resources, performance, and also through producing and commercializing new products and services, entrepreneurship leads to innovation (Thornberry, 2003).

## III. LEARNING ORIENTATION

Organizational learning has in the past decades turned into an important factor in obtaining competitive advantage (Brockman and Morgan, 2003). That is why, the ability to learn factor than rivals is, now, known as a source for stable competitive advantage (Slater and Narver, 1995).

Organizational learning, which is known as the acquisition of knowledge, skill and ability, is an approach that enables a manager to change his mental models about dealing, market and rivals (Galer and Van der Heijden, 1992); moreover, through concentrating on the understanding and effective

satisfying of customers' overt and covert needs (Dickson, 1992; Sinkula, 1994), it leads to pleasant consequences including success in new product, maintenance of customers, growth of profitability and getting access to the quality desirable from the point of view of customer (Slater and Narver, 1995).

Furthermore, by increasing the flexibility of organization, it enables the organization to quickly react against new environmental opportunities and threats (Slater and Narver, 1995). Therefore, it is necessary all dealings that are competing in a dynamic and changing environment to follow learning processes change their behavior and improve their performance (Slater and Narver, 1995). However, the main challenge facing each dealing is the creation of a culture which is based on learning in organization (Dickson, 1992).

Learning orientation is known as the acceptance of learning in organization (Rhee, Park and Lee, 2009). In other words, learning orientation is indicative of organization's tendency to create and use knowledge in organization (Nguyen and Barrett, 2006). Moreover, by strengthening learning throughout organization, in additions to providing more opportunities for learning and the sharing of individuals in the knowledge of others (Nonaka and Takeuchi, 1995), learning orientation facilitates the turning of individual knowledge into organizational knowledge (Nonaka and Takeuchi, 1995) and leads to the creation of productive learning (Nguyen and Barrett, 2006). Considering the above discussions, for organization to benefit from the process of learning orientation, it needs organizational capabilities including commitment to learning, open-mindedness and shared vision as the different dimensions of learning orientation (Sinkula, Baker and Noordewier, 1997).

## IV. COMMITMENT TO LEARNING

Organization's commitment to learning is the amount to which an organization considers learning as worthy and tries to not only promote the process of learning (Sinkula, Baker and Noordewier, 1997), but also to create and strengthen an atmosphere for learning in organization (Norman, 1985). Actually, learning is known by the firm that has commitment to learning as an important investment which is necessary for organization's maintenance (Sinkula, Baker and Noordewier, 1997) and plays a fundamental role in updating the organization's assets and abilities related to key efforts (Wang, 2008).

Because entrepreneurship orientation refers to its considering customers in market as highly valuable through innovation and the creation of products, processes and strategies that satisfy needs of customers (Covin and Miles, 1999), it is in need of creating a suitable perception from market in different parts of organization and also the creation of a mood which is responsive to environmental changes (Kohli and Jaworski, 1990). Therefore, the thing that can be expected is that entrepreneurship orientation will cause commitment to learning to be strengthened in organization. In fact, this is because commitment to learning can make organization capable of developing its knowledge about market, rivals and customers (Kandemir and Hult, 2005), and this way helping it not to lose opportunities created in market

due to its having knowledge and ability for understanding and predicting customer's needs (Cahill, 1996; Damanpour, 1991).

On the other hand, as innovation entails the acquiring, spreading and using new Knowledge (Damanpour, 1991; Verona, 1999), organization's commitment to learning is able to increase firm's ability to innovative (Calantone, Cavusgil and Zhao, 2002), which is because of its creating and developing knowledge, ability to recognize and predict opportunities (Cahill, 1996; Damanpour, 1991). Commitment to innovation, and ability to offer and use technology for innovations. This is why the organization that has commitment to learning is more capable of innovation as compared to its rivals (Damanpour, 1991). Considering the above discussion, the following hypotheses are put forward:

H<sub>1</sub>: entrepreneurship orientation has a significantly positive relationship with commitment to learning.

H<sub>2</sub>: commitment to learning has a significantly positive relationship with innovation.

## V. OPEN – MINDEDNESS

Open-mindedness refers to the critical evaluation of organization's daily operations and the acceptance of new ideas (Sinkula, Baker and Noordewier, 1997). In other words, it is a process through which organization engages in reviewing the existing knowledge or the old assumptions and habits (Nguyen and Barrett, 2006). According to open – mindedness, the existing knowledge can make as a fundamental obstacle that prevents organization from taking environmental changes into account, and by decreasing the ability to predict market, it cause damage to the long-term relationship between firm with customers, distribution channels and suppliers (Schindehutte, Morris and Kocak, 2008). In other words, the previous learnings prevent the new learnings of organization (Bettis and Prahalad, 1995).

As entrepreneur deeds involve the creation of new resources and/or the combination of the existing resources with new methods with the aim of developing and commercializing new products and departing for new markets and/or presenting service to new customers (Hult, Hurley and Knight, 2004), thus there always exists a need for developing new knowledge and vision in organization (Kohli and Jaworski, 1990) and this may they support the attitude of open-mindedness in organization.

On the other hand, having this attitude, firms continuously increase their ability to learn with respect to market, customers and rivals, and by constantly reviewing the existing knowledge, they manage to support their innovation. Therefore, it is impossible for firms to innovate without this attitude (Calantone, Cavusgil and Zhao, 2002). Considering the above discussions, the next hypotheses are put forward as follows:

H<sub>3</sub>: entrepreneurship orientation has a significantly positive relationship with open-mindedness.

H<sub>4</sub>: open-mindedness has a significantly positive relationship with innovation.

## VI. SHARED VISION

Shared vision refers to the concentration of all members of

organization on learning that leads to the strengthening of their energy, commitment and purposefulness (Sinkula, Baker and Noordewier, 1997). Actually, in addition to creating harmony in different parts of organization, shared vision causes the increase in the quality of learning (Calantone, Cavusgil and Zhao, 2002).

As entrepreneurship orientation involves the creation and promotion of entrepreneurial behavior and vision among different parts of organization (Zahra, 1995), all individuals and also all parts of organization need to pay considerable attention to learning and acquisition of knowledge so that they can challenge lack of environmental confidence through innovative responses and entrepreneurial deeds. Thus, this can cause the strength of shared vision in different parts of organization.

On the other hand, without shared vision, learning of individual in organization will be extremely meaningless. In other words, even though individual are stimulated for learning, their problem is that they don't know what to learn unless they have a shared vision (Calantone, Cavusgil and Zhao, 2002). Therefore, the reason why organizations are unable to perform creative ideas is lack of shared vision between them (Hult, 1998).

This is why shared vision can lead to strengthening of innovation in firm. Thus, the following hypotheses are put forward:

H<sub>5</sub>: entrepreneurship orientation has a significantly positive relationship with shared vision.

H<sub>6</sub>: shared vision has a significantly positive relationship with innovation.

## VII. DATA and EMPIRICAL MODELS

### *Sample*

Organizations should deal with quick changes in technology and wavy markets (Calantone, Cavusgil and Zhao, 2002). The occurrences of continuous changes in technology indicate the necessity on the part of small firms to pay attention to innovation (Kara, Spillan and DeShields, 2005). Despite the fact that large firms have increasing got dependent on small ones for the provision of the parts they need, and although this dependency has had a positive effect on the development of small firms, the power of large firms has forced small ones to decrease their prices and to increasingly accept the strategies that are based on innovation.

Moreover, continuous development of products' features, which is considered as a competitive threat in market, has caused small firms to seek for strong and stable competitive advantages that let them quickly respond to market's changing conditions. Thus, the need of small firms to pay attention to innovation as an inevitable necessity has distinguished this area as a suitable field for research.

Based on the statistics present in the website of Industry and Mining Organization, there are about 7101 small firms in the province of Tehran. Considering the result of a pilot study, the standard deviation was decided to be 0.8. Moreover, using a without replacement sampling which was done in a small population, sample size was decided to be 81, at the significant level of 0.05, the test power (1-β) of 0.8, and the



maximum error of 0.25. Because it was predictable that some firms would probably not respond the questionnaires, causing fall of data, 220 firms were selected through a without replacement simple random sampling and the questionnaire was sent to them. Then from all the questionnaires 82 were gathered.

#### Questionnaires and Scales

In order to provide the questionnaire and to gather data regarding the research variables, the questionnaires of the previous studies having the same variable were used. Thus, the tools for data collection were of enough validity. Moreover, to investigate the reliability of the questionnaire, a pre-test was performed on a small sample using the cronbach's  $\alpha$  coefficient on all the items and the  $\alpha$  score for all the variables were indicative of the questionnaire's having a high level of reliability (table I).

Table I also shows the  $\alpha$  relating to each variable with regard to the deletion of each question. Due to small difference between the  $\alpha$  score obtained after the deletion of each question and the overall  $\alpha$  relating to that variable, it seems that with the deletion of each question, the overall  $\alpha$  will not increase and this strengthens the reliability of the questionnaire.

Moreover, in order to investigate *Entrepreneurship Orientation* 8 question used based on the scale of Covin and Slevin (1989). This scale examines firm's tendency to perform bravely and courageously and also measures the amount of tolerance against danger. The scale of Covin and Slevin (1989) have been used in many studies (Covin and Miles, 1999; Covin and Slevin, 1989, 1988; Miller, 1983).

*Commitment to Learning* was measured by 4 questions using the scale of Galer and Van der Heijden (1992) and Sinkula (1994); *Open-Mindedness* was also measured through 4 questions using the scale of Hult and Ferrel (1997); and at last *Shared Vision* was measured with the help of 4 questions using the scale of Sinkula, Baker and Noordewier (1997). The questions relating to the above variable put the emphasis on the values that, with affecting the tendencies of a firm, cause the firm to diligently seek for acquiring new knowledge and challenging the existing conditions. These scales have been used in many researches (Hult, Hurley and Knight, 2004; Hult, 1998; Calantone, Cavusgil and Zhao, 2002; Covin, 1991). The learning orientation source is calculated from the mathematical mean of the above three variables. *Innovation* is measured through 5 questions using the scale of Hurley and Hult (1998). This scale examines management's viewpoint about the acceptance of new and innovative ideas in organization. All the above questions were designed in the format of a Likert Scale with 5 levels, from 1 = very little to 5 = very Much.

TABLE II. DESCRIPTION STATISTICS, CRONBACH'S ALPHA AND CORRELATION

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	Mean	Standard Deviation	Cronbach's coefficient alpha	Entrepreneurship orientation	Commitment to learning	Shared vision	Open-mindedness	Innovation
Entrepreneurship orientation	3.346	0.658	0.86	1				

Item	Reliability coefficients Alpha if (Cronbach's coefficient alpha) item is deleted
<b>Entrepreneurship Orientation (N of items=8) (<math>\alpha=0.86</math>)</b>	
We accept risks to find the opportunities for growth in market.	0.850
A great deal of our decision is accompanied by lack of confidence.	0.928
We usually emphasize on research and development.	0.832
We usually try to perform actions before rivals.	0.823
A large amount of goods and services is introduced to our rivals by ourselves.	0.844
The emphasis of firm is on vast activities with regard to finding its positions, products and services compared to rivals in market.	0.825
Firm provides his staff with the opportunity to have creativity and then to apply it in their own deed.	0.833
Our firm is more capable of recognizing new opportunities than rivals.	0.833
<b>Commitment to learning (N of items=4) (<math>\alpha=0.97</math>)</b>	
Managers, basically, agree that our business unit's ability to learn is the key to our competitive advantage.	0.969
The basic values of this business unit include learning as a key to improvement.	0.973
The sense around here is that employee learning is an investment, not an expense.	0.976
Learning in my organization is seen as a key commodity necessary to guarantee organizational survival.	0.972
<b>Shared vision (N of items=5) (<math>\alpha=0.83</math>)</b>	
There is a total agreement on our organizational vision across all levels, functions and divisions.	0.732
All employees are committed to the goals of this organization.	0.752
All employees view themselves as partners in changing the direction of the business unit.	0.856
There is a commonality of purpose in my organization.	0.822
<b>Open-mindedness (N of items=4) (<math>\alpha=0.90</math>)</b>	
We are not afraid to reflect critically on the shared assumptions we have made about our customers.	0.924
Personnel in this enterprise realize that the very way they perceive the marketplace must be continually questioned.	0.851
We rarely collectively question our own bias about the way we interpret customer information.	0.853
We continually judge the quality of our decisions and activities taken over time.	0.864
<b>Innovation (N of items=5) (<math>\alpha=0.90</math>)</b>	
Management actively seeks innovative ideas.	0.874
Innovation, based on research results, is readily accepted in our organization.	0.875
Innovation is readily accepted by management.	0.883
People are penalized for new ideas that don't work.	0.913
Innovation in our organization is encouraged.	0.881

Commitment to learning	3.756	0.824	0.97	0.753**	1			
Shared vision	3.454	0.648	0.83	0.730**	0.696**	1		
Open-mindedness	3.506	0.714	0.90	0.818**	0.747**	0.807**	1	
Innovation	3.792	0.656	0.90	0.829**	0.722**	0.671**	0.817**	1
N				82	82	82	82	82

p<0.01 \*\*

### VIII. RESULTS

As the scale of the research variables were ordinal in nature, to investigate the relationship between the variables and the amount of correlation among them, the Spearman Correlation Coefficient was used (table II). The results, shown in table II, indicate the existing of a strong relationship between the research variables at the significance level of 0.01. Therefore, with respect to the results shown in table II, the Regression Analysis was used to test the research hypotheses.

#### *The effect of entrepreneurship orientation on learning orientation*

The results of the Regression Analysis about the effect of entrepreneurship orientation on different dimensions of learning orientation (i.e. commitment to learning, open-mindedness and shared vision) indicate the acceptance of the related hypotheses. As expected, entrepreneurship orientation has significantly positive relationship with commitment to learning ( $\beta = 0.753$ ;  $t = 10.237$ ;  $p < 0.001$ ), open-mindedness ( $\beta = 0.818$ ;  $t = 12.699$ ;  $p < 0.001$ ) and shared vision ( $\beta = 0.730$ ;  $t = 9.552$ ;  $p < 0.001$ ), leading to the acceptance of hypotheses 1, 3 and 5, respectively (table III).

#### *The effect of learning orientation on innovation*

The findings acquired from the Regression Analysis regarding the effect of different dimensions of learning orientation (i.e. commitment to learning, open-mindedness and shared vision) on innovation are indicative of the acceptance of the related hypotheses. The results show, commitment to learning ( $\beta = 0.722$ ;  $t = 9.321$ ;  $p < 0.001$ ), open-mindedness ( $\beta = 0.817$ ;  $t = 12.675$ ;  $p < 0.001$ ) and shared vision ( $\beta = 0.671$ ;  $t = 8.093$ ;  $p < 0.001$ ) are positively and significantly related to innovation, thus accepting the hypotheses 2, 4 and 6, respectively (table IV).

#### *The effect of entrepreneurship orientation on innovation and performance*

Considering the results of the Regression Analysis, apart from accepting the main hypotheses of the research, other finding of the study that are related to entrepreneurship orientation, innovation and performance of small size firms (i.e. profitability, sale and ROI) are also presented as additional findings.

TABLE III. REGRESSION OF LEARNING ORIENTATION AND INNOVATION

Dependent Variable Independent	Entrepreneurship orientation				
					Adjusted

Variables	B	t	F	R <sup>2</sup>	R <sup>2</sup>
Commitment to Learning	0.753 ***	10.237	104.7 ***	0.567	0.562
Shared Vision	0.730 ***	9.552	91.2***	0.533	0.527
Open-Mindedness	0.818 ***	12.699	161.2 ***	0.668	0.664

P<0.001 \*\*\*

TABLE IV. REGRESSION OF LEARNING ORIENTATION AND INNOVATION

Dependent Variable Independent Variables	Innovation				
	B	t	F	R <sup>2</sup>	Adjusted R <sup>2</sup>
Commitment to Learning	0.722***	9.321	86.8***	0.521	0.515
Shared Vision	0.671***	8.093	65.4***	0.450	0.443
Open-Mindedness	0.817***	12.675	160.6 ***	0.668	0.663

p<0.001 \*\*\*

Regression Analysis shows that there is a significant and positive relationship between entrepreneurship orientation and innovation ( $\beta = 0.829$ ;  $t = 13.254$ ;  $p < 0.001$ ). The results of the Regression Analysis also indicate that entrepreneurship orientation has significantly positive relationships with profitability ( $\beta = 0.529$ ;  $t = 5.572$ ;  $p < 0.001$ ), sale ( $\beta = 0.584$ ;  $t = 6.442$ ;  $p < 0.001$ ) and ROI ( $\beta = 0.447$ ;  $t = 4.471$ ;  $p < 0.001$ ).

### IX. CONCLUSIONS

The present study investigated the effect of entrepreneurship orientation on learning orientation and innovation of small firms of Tehran. To do so, and in line with the literature existing in the area of the aforementioned variables, 6 hypotheses were put forward the first three of which, respectively, examined the effect of entrepreneurship orientation on the different dimensions of learning orientation on the different dimensions of learning orientation including commitment to learning, open-mindedness, and shared vision. Furthermore, the other hypotheses, respectively, investigated the effect of the different dimensions of learning orientation on innovation.

The findings of the study show that entrepreneurship orientation has a significantly positive effect on learning orientation of firm. This finding is consistent with those of previous studies (Rhee, Park and Lee, 2009; Slater and Narver, 1995; Wang, 2008). In other words, a high level of entrepreneurship orientation in organization leads to strengthening different dimensions of learning orientation, including commitment to learning, open-mindedness and shared vision, in small firms.

The results indicate that entrepreneurship orientation has a significantly positive effect on organization's commitment to learning. For an entrepreneurial oriented firm to consider customers as specifically valuable via the creation of products, processes and strategies suitable for market and via the performance of innovative deeds (Covin and Miles, 1999) it needs to create an understanding and perception suitable for market in different parts of organization (consistent with Kohli and Jaworski, 1990). Therefore, such a firm should try to create and develop its own knowledge related to market and environment, which leads to the formation and strengthening of an atmosphere for learning in organization. Consequently, an organization following an entrepreneurial oriented considers learning as valuable and tries to promote it. This finding is consistent with the results of previous studies (Rhee, Park and Lee, 2009; Wang, 2008; Slater and Narver, 1995; Kohli and Jaworski, 1990).

Moreover, the results of the study show that entrepreneurship orientation has a significant and positive effect on open-mindedness. Because entrepreneurial deeds involve the acquisition and utilization of new knowledge and awareness in organization through the creation of new resources, combination of the existing resource with new methods, development and commercialization of new products, entrance into new markets and presentation of services to new customers (Hult, Hurley and Knight, 2004), entrepreneur oriented firm continuously copes with examining market and recognizing the existing gaps and the unused opportunities in market. Moreover, such a firm seeks for new knowledge and tries to support open-mindedness culture in firm, in addition to challenging its own knowledge, awareness, methods and assumptions related to market, rivals and customers (consistent with Wang, 2008).

Moreover, the results are indicative of a significantly positive relationship between entrepreneurship orientation and shared vision. In other words, due to creating and promoting entrepreneurial behavior and vision in different parts of organization, entrepreneur oriented firm focuses the attention of individuals and different parts of organization on learning and acquisition of knowledge so that it can challenge lack of environmental confidence and present innovative responses, which eventually leads to the development of shared vision in organization.

The results of the study show that learning orientation has a significant and positive effect on firm's innovation. This result is consistent with those of previous studies (Hurley and Hult, 1998; Calantone, Cavusgil and Zhao, 2002; Sinkula, Baker and Noordewier, 1997; Damanpour, 1991). In other words, a high level of commitment to learning, open-mindedness and shared vision leads to more innovation in small firms.

With regard to the findings, organization's commitment to learning leads to strengthening the culture of learning in organization. In fact, in this culture, due to the fact that organization has a tendency to create and use knowledge, more opportunities are provided for learning in organization, thus increasing the capacity for innovation. Actually, developing individual's knowledge and having them share their knowledge with each other on the one hand (Sinkula,

Baker and Noordewier, 1997), and increasing the ability to perform new ideas, processes or products on the other (Hurley and Hult, 1998), leads to increase in the capacity of firm's innovation (Hurley and Hult, 1998; Damanpour, 1991).

Therefore, due to having knowledge and ability to understand and predict customer's needs (Cahill, 1996; Damanpour, 1991), having commitment to innovation (Gatignon and Xuereb, 1997) and also because of strengthening the atmosphere for learning and welcoming new ideas in organization (Sinkula, Baker and Noordewier, 1997), the organization that has commitment to learning is capable of increasing its ability of innovation and this way benefiting from having a more capacity for innovation as compared to its rivals. This result is consistent with those of other researches (Hult, Ketchen and Nichols, 2003; Calantone, Cavusgil and Zhao, 2002; Damanpour, 1991).

Moreover, the findings of the study show that the high level of open-mindedness in small firms leads to their having more innovation, causing the second hypothesis to be accepted. In other words, benefiting from open-mindedness, firm will be able to critically evaluate organization's daily operations (Sinkula, Baker and Noordewier, 1997) and to challenge previous learning (Bettis and Prahalad, 1995) and through deleting repetitive methods, assumptions and previous beliefs, it can manage to support innovation in organization (Calantone, Cavusgil and Zhao, 2002).

Furthermore, the findings indicate the existence of a positive and significant relationship between shared vision and innovation. In other words, through concentrating on learning, small firms manage to strengthen energy, commitment and purposefulness of their personnel (Sinkula, Baker and Noordewier, 1997). In general, the findings show that learning will be meaningless, unless there is a single thing to which personnel can focus their attention. Otherwise, they won't know what to learn even if they are all highly motivated to learn. This finding is consistent with previous studies (Calantone, Cavusgil and Zhao, 2002; Hult, 1998; Sinkula, Baker and Noordewier, 1997).

The findings also show that innovation has a positive and significant effect on the performance of small firms. In general, having a high ability to innovate, organization will be enabled to use and support new ideas and processes which may lead to supplying new products, services or technologies. Moreover, coordinating organization with environmental changes, innovation causes small firms to develop competitive advantage and acquire supreme performance (Hult, Ketchen and Nichols, 2003; Hurley and Hult, 1998; Damanpour, 1991).

Finally, being related to previous studies in the field of innovation and learning organization, the findings of the present research provides readers with suitable empirical evidence in the research literature of the country in general and in the area of small firms of Tehran in particular. It also provides suitable tools for managers and other researchers.

#### X. RESEARCH LIMITATIONS

The present study, like any other research, had some limitations that need to be mentioned. First, it was limited to



small industries of Tehran, thus the used statistical sample cannot be representative of other industries and provinces. So, the results cannot be generalized to other studies. Second, all data were gathered at a specific time, thus the variables and results are limited to that point of time.

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