Providing a Model for Competitive advantage Based on Organizational innovation through the ability to absorb Knowledge Market, Market Orientation and Entrepreneurial viewpoint

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Abstract

Nowadays the most important concern of the organizations is the formulation and implementation of strategies which guarantee their success and survival in complicated and changing situations, so that with active presence in competitive market to gain a share in this market, they show appropriate measures from themselves. The aim of this project is to examine the effects of effective factors on innovation and the effect of innovation on competitive advantage. The Population of present study consists of all institutions of knowledge of science and Technology Park in Shiraz that is a total of 50 institutions. Morgan tables are used to estimate the sample size and the required sample size is 44 participants. According to non-cooperation of some institutions, eventually 42 institutions is a total of 99 questionnaires were collected .to analyze the data, structural equation modeling is used. According to the findings, all the study hypotheses were confirmed.

Keywords: competitive advantage, innovation, the ability to absorb knowledge, learning, market-oriented, entrepreneurship.
Introduction
The most important feature of the present age is uncertainty, complexity, globalization, increasing technological changes. Organizational success under this conditions necessitates the change in organization’s activities and particularly leadership and management of the third millennium organizations. Nowadays the most important concern of the organizations is the formulation and implementation of strategies which guarantee their success and survival in complicated and changing situations, so that with active presence in competitive market to gain a share in this market, they show appropriate measures from themselves. In research organizations, maintaining comparative advantage depends on innovation. Also identifying and anticipating customer needs for enterprises to gain competitive advantage and market segmentation is essential. The customer is considered as a key and central factor in strengthening the organization compatibility with complex and difficult environmental conditions and orientation of all the goals and strategies and resources is around attracting and keeping the customers. For companies which have the maintenance and improvement concern for their competitive position in the market, keeping and strengthening the customer loyalty is considered a strategic challenge.
Successful organizations and companies have features that distinguishes them from unsuccessful companies and allow them to last longer in the market environment. They are chosen as excellent in the fields of continuous improvement of product quality, customer service and staff training (Lin, Yeh, Chy, & Cher, 2003). Religion, in order to achieve competitive advantage is one of examples that organizations follow. Competitive advantage is a long term profit or excellence from the implementation of the strategy and creation of a value that is not like the value of existing and potential competitors and competitors are unable to imitate and perform. Hence this research aims to identify effective factors on creating technological and market innovation by studying existing history and studying the experts comments and by the help of statistical analysis, the accuracy of effects of each index on innovation has been studied and finally it addresses the relationship between innovation in services and these companies productions by creating a competitive advantage compared with existing competitors in market and offer the final result of the study in order to provide a view based on the factors affecting innovation in organization for senior managers and to offer a service on the path to create competitive advantage for surveyed companies.

Theoretical foundations of research
Competitive advantage
Based on this, the organizations should think of finding their sustainable competitive advantage. It can be defined widely as an organization quality which is able to surpass rivals and keep its efficiency more than normal limit (Jeyavelue, 2007). Competitive advantage is the level of company’s increasing attractiveness of proposals compared to rivals in view of costumers. (Keegan, 2009). Competitive advantage originates from certain assets and clear capabilities. Although specific resources of companies does not lead to higher performance, but most of the time specific resources lead to higher position in market and as a result, leads to better performance. Generally competitive advantage is both cost advantage and differentiation in
products (Juan Li & Zheng Zhou, 2010). Wide studies have been conducted about competitive advantage creation in innovative organizations which we will describe some of them: Julie Juan Li and Kevin Zheng Zhou in an article called “how foreign companies of China can achieve competitive advantage in emerging economics: market-oriented and management relationships” study this issue that how market-oriented and management relationships affect on competitive advantage and therefore on performance. According to project, they concluded that both cases leads to company’s success, but in different ways! Market-oriented reinforces the organization performance by creating cost advantage or distinguish, whereas management relationships reinforces organization performance by way of organization advantages like achieving organization supports or rare sources and also organization advantages in turn lead to cost advantage and it results in higher and better performance (Juan Li & Zheng Zhou, 2010). Ren et al in their study entitled “sustainable competitive advantage and marketing innovation in companies” examine Chinese companies by a practical approach. The results showed that marketing innovation is an important source for sustainable competitive advantage, specially for those active companies in China’s dynamic and competitive environment. (Ren, Xie, & Krabbendam, 2010)

Innovation

Innovation and creation are basic key for happiness and economic growth. Not only for individual companies, but also it applies to a group of companies and nations and regions and situations. With the creation of new competitive conditions in the global economy, innovation is considered an essential factor in adopting to new conditions and achieving advantages from new opportunities (Delmas, 2002). The novelty of idea is referred to its being pure and being authentic. The meaning of idea efficiency is that idea or other related elements are directly related to goals of organization and being a basis for value creation for organization (Todd, 2004).

In other words it can be said that technological innovation is related to technology used in products, services or production processes (Carmen & Jose, 2008). In a more general division, we can divide innovation into 2 categories: organizational and technological innovations (Mothe, 2010). Technological innovation is referred to as innovative changes in products and their production processes, while organizational innovations is more related to change in work practices or what is called organization routines. The distinction between the two is important in a way that the distinction between them, specifies a general distinction between technical and social structures. Indeed technological innovation includes innovation in process and innovation in production. However the purpose of technological innovation in the present study is the innovation in products that is providing services and totally new products or modifying old products according to their use or characteristics (Mothe, 2010).

Technological innovation

Being innovative in business is a degree that company offers the new product or service by using accumulated knowledge of costumers, rivals and technology (Carmen & Jose, 2008). Technological innovation is a kind of innovation which is more used for boosting performance and creating added value and leads to achievement and development of competitive advantage in
manufacturing companies. so this kind of innovation is crucial in relation to product reforms and existing processes in organization (Lee, Leong, Hew, & Ooi, 2009). Product and process innovation are important elements in technological innovation. (Valencia, Valle, & Jemenez, 2010)

**Market innovation**
A study is conducted by Liao & Wu entitled “view of knowledge management system, organizational learning and organizational innovation” in 2010. The findings suggest that the relationship between knowledge management and organizational innovation is significantly positive and knowledge management has a positive influence on organizational learning (Liao & Wu, 2010). Other researchers also studied the effective factors on innovation in Turkish companies and concluded that companies benefit from innovation in products and services are those which benefit from innovations in processes field, too. Also there are a group of companies that despite large investments to increase their competencies, do not benefit from any innovations. In addition, among internal factors in organization influencing technological innovation, we can name the most important factors such as company participation in research and development activities, management experiences and formal training programs. Among the external factors, company’s international relations with other companies are the most prominent factors in Turkish companies being innovative (Gungor & Gozlu, 2012).

**The ability to absorb knowledge**
The concept of absorption capacity in Macroeconomics originates from where it refers to ability of an economy to use and absorb sources and external information. Also the absorb capacity is essential for innovative capabilities of organization (Coenders & Arbussà, 2007) or indeed they are a set of processes and ordinary course of organization that companies identify, capture, transfer and exploit the knowledge by that (Fosfuri, 2008). Absorption capacity is as the ability of companies to identify new and external data, to integrate and to use them for commercial purposes and is a critical factor to reinforce the probability of acceptance and to use new and complicated technologies for innovation (Gomeza & Vargasb, 2009). Xie Yongping study effective factors on innovation on nets and concluded that net structure and knowledge supply besides that innovation are effective on nets directly and positively, but it also affects on absorption capacity positively and also absorption capacity has a direct and positive effect on innovation of nets (Youngping, Yanzheng, & Haomiao, 2011). Absorption capacity means company’s abilities to identify, capture and transfer knowledge to achieve business goals (Yuanli, 2012).

**Organizational learning**
Organizational learning consists of personal learning of organization employees. But this learning is more than individual learning (Abel, 2008). Learning is one of key mechanisms to produce new knowledge and learning-oriented in organization has much application in nature of innovation and the competitiveness of the company that means the development of the
knowledge and attitude which affects on behavior through existing values and beliefs in organization culture (Westerlund & Rajala, 2009).

In this economical changes and fluctuations and uncertainty, many organizations compete for survival. For better development and performance, organizational learning is one of strategic phenomena which seems essential for company’s long-term success (Liao & Wu, 2010). Learning is defined as a permanent change in experience and results of repetitive behaviors that leads to better performance and faster performance of tasks. From a strategic perspective, learning is a source for competitive advantage (Gunsel, Siachou, & Acar, 2011).

According to Shahabi and Jalilian’s results, it can be said that organizational learning has a positive and significant impact on organizational innovation. Capabilities of organizational learning will more lead to better performance of organization in product and process innovation. Also organizational learning, as a dependant variable, moderates the relationship between knowledge inertia and organizational innovation and the experience inertia leads to increase organizational innovation through increasing of organizational learning.

Entrepreneurship

On organizational entrepreneurship. One of the variables that can be said has an important influence on entrepreneurship is Spirituality in organization (Kanesan Abdullah, Alzaidiyeen, & Aldarabah, 2009). In a research, added self-determination in addition to the dimensions Merwe, 2010 Organizational entrepreneur has strategic orientation which includes reconstruction of products, processes, services, strategies or even the whole organization (Ozdermirci, 2011). The entrepreneurship has been of interest to researchers and scholars from late 20th century. But the importance of this issue is so important today that is said economical development is linked with development of entrepreneurship or in other words, entrepreneurship is the engine of economic growth and development. There are many definitions of entrepreneurship, but all definitions have a same point of view in a set of characteristics for an entrepreneur. There are numerous definitions of entrepreneurship. Entrepreneurship is looking for discovering new opportunities such as new products, new processes, new organizational structure design and conquer new markets (Audretsch, 2012). In a comprehensive definition, this definition of entrepreneurship may be the case: an entrepreneur is someone who can identify new opportunities, express new income ideas with necessary strategies and methods for self-employment and also be able to concede his ideas to establish firm and economic business. Today the subject of entrepreneurship has entered into various fields. Having regard to this topic will have a profound influence on the development of societies. Most authors believe that there is a potential level of innovation and creativity in all people in the society, although promoting this advantage is required to prepare a detailed plan by managers (Marzban, Moghimi, & Ramezan, 2013).

Market-orientation

Since 1980s, the concept of market-orientation has entered into university researches as effective strategy on companies performance and is widely used. Market orientation is related to development of market understanding and its use for marketing activities. For this reason,
market-orientation can be known as acceptance of marketing concept as business philosophy which guides the competitive strategies of organization (Oscar & Javier, 2005).

Panigyrakis & Theodoridis stated that during 1990 among other terms related to Marketing field, market-orientation has attracted more attraction and that is why market-orientation is defined as company’s ability to learn continuously about costumers, rivals and environmental factors in existing and potential markets (Panigyrakis & Theodoridis, 2007). Taylor and et al believe that market-orientation means awareness creation about market to anticipate current and future needs of costumers. This concept has focused more on achieving, publishing and application of information and also on its relationship with effective services about costumer’s requirements (Charles, et al., 2008). Zhou and et al in a research examine how customer value influences on company’s market-orientation and on competitive advantage and company performance. This research is conducted in the hotel service industry. In this research, the customer’s value is divided into services and emphasis on price. Market-orientation also consists of two aspects: competitor-orientation and customer-orientation. Also competitive advantage is divided into two aspects: market differentiation and innovation differentiation. Finally company performance consists of market performance and financial performance. The results of study is on this basis: customer value affects on company’s attitude and leads to more competitor-orientation and customer-orientation (Zhou, Brown, & Dev, 2009).

Kumar, Jones, Venkatesan and Leone collected data in their study entitled “is the market-orientation a source for achieving competitive advantage in organizations?”. The interval of this research was between 1997-2010 which during this years by examining market-oriented activities of 261 companies, this results were achieved: the results shows that companies which had more emphasis on market-orientation, had better performance and also better competitive advantage in comparison to other companies (Kumar, Jones, Venkatesan, & Leone, 2010).

**Conceptual models and research hypotheses**

After identifying effective factors on technological innovation and market innovation, along with competitive advantage by the help of studying existing history and expressing brief information about each variables in this research, it has been tried to better understand the model provides a conceptual study for statistical analysis.
In order to achieve the objectives of the study and explanation of the research question, research hypotheses can be stated as follows:

- The ability to absorb knowledge and technological innovation has positive and significant impact on the market.
- Market-orientation has positive and significant impact on market and technological innovation.
- Learning-orientation has positive and significant impact on market and technological innovation.
- Entrepreneurial vision has positive and significant impact on market and technological innovation.
- Technological innovation and market have positive and significant impact on competitive advantage.

**Methods**

Current research in terms of application target and in terms of obtaining basic information to assess and explain the conceptual model of the research descriptively and based on the nature of the research, it is placed in the category of scientific research and in terms of collection of data method, is a kind of survey research, because the required data has been collected through questionnaires.

The population of the present study is all knowledge institutions of Science and Technology Park of Shiraz which is a total of 50 companies. Each company has an average of 5/2 employees.
Morgan tables are used to estimate sample size and the required sample size is 44 companies. According to non-cooperation of some institutions and partial completion of the questionnaire, it has been tried to distribute the questionnaire among all employees. In the end, 42 institution’s information in 99 questionnaires were completed and returned that’s been the base of current study’s analysis.

**Measuring tools**

Data collection tools in current study is a questionnaire that consists of two parts. The first part is related to respondents’ general and demographic information such as: age, sex, education, ... and the second part contains items made to measure research variables using the Likert spectrum of 5 options that totally consist of 50 questions.

<table>
<thead>
<tr>
<th>resource</th>
<th>question</th>
<th>Variable name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Berghman, 2006</td>
<td>1-10</td>
<td>identify combination</td>
</tr>
<tr>
<td>Berghman, 2006</td>
<td>11-15</td>
<td>combination transmission</td>
</tr>
<tr>
<td>Berghman, 2006</td>
<td>16-18</td>
<td></td>
</tr>
<tr>
<td>(Juan Li &amp; Zheng Zhou, 2010)</td>
<td>19-22</td>
<td>differentiation cost</td>
</tr>
<tr>
<td>(Juan Li &amp; Zheng Zhou, 2010)</td>
<td>23-26</td>
<td></td>
</tr>
<tr>
<td>(Jiménez-Jiménez &amp; Sanz-Valle, 2011)</td>
<td>27-32</td>
<td>technological innovation</td>
</tr>
<tr>
<td>(Jiménez-Jiménez &amp; Sanz-Valle, 2011)</td>
<td>33-36</td>
<td>market</td>
</tr>
<tr>
<td>(Keskin, 2006)</td>
<td>37-41</td>
<td>learning</td>
</tr>
<tr>
<td>(Keskin, 2006)</td>
<td>42-46</td>
<td>Market-orientation entrepreneurial</td>
</tr>
<tr>
<td>(Qiu, 2008)</td>
<td>47-50</td>
<td></td>
</tr>
</tbody>
</table>

**Analysis of results**

**Data analysis method**

Data interpretation is meant to explain and give meaning to the data. The raw data is difficult and impossible to explain. Therefore one must analyze the data and then interpret them. Analysis means classification, adjustment, process, manipulation and summary to find responses for research questions. The purpose of analysis is analysis of data as understood and interpreted and so as to study the relationships of different variables associated with the research issue.

In analyzing, according to the results, inferences about studied relationships are done in research and come to conclusions about these relationships. A researcher who interprets the results, is searching for their meaning and application. In this research, the collected data in entered into SPSS software through questionnaire and necessary analyzes were conducted on them and in order to fit the model and test the research hypotheses, PLS method is used which is the same partial least squares approach. In this method, there is no sensitivity compared to sample size and normal distribution of data and it is in such a way that can perform analyzes with a sample size less than Thirty.
There are a wide range of criteria and Fitting Indexes that can be used for measuring the Fitting of whole model. Unfortunately none of these are superior in all respects than others. Because an specific Fitting Indexes performs differently depending on the sample size, estimation method, model complexity ,hypotheses about being normal or combination of above conditions . hence different people depending on the various parameters of model may use various indexes for Fitting. In PLS software ,in order to check the research conceptual model ,we should consider Fitting condition of measurement model and structural models. To check the Fitting of measurement model , some indexes should be noted such as Cronbach’s alpha, composite reliability coefficient and average extracted variance . if the amount of Cronbach’s alpha be higher than 0.7 , the amount of composite reliability coefficient be higher than 0.8 and the amount of average extracted variance be higher than 0.5 , so the measurement model is a good fit and Has a good Fitting. in addition ,the most important and the most widely used index in order to check the Fitting of structural model is explained variance amount index that is shown with R2. What this index means is that how much the total set of independent variables could explain dependant variable changes generally ! therefore this index shows a kind of model explanatory power . table 2 summarizes Fitting Model Indexes.

<table>
<thead>
<tr>
<th>Explained variance</th>
<th>Composite reliability</th>
<th>Extracted variance</th>
<th>alpha</th>
<th>Hidden variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>/443</td>
<td>/920</td>
<td>/515</td>
<td>0/83</td>
<td>Knowledge absorption</td>
</tr>
<tr>
<td>/332</td>
<td>/824</td>
<td>/540</td>
<td>0/75</td>
<td>Competitive advantage</td>
</tr>
<tr>
<td></td>
<td>/839</td>
<td>/511</td>
<td>0/73</td>
<td>Technological innovation</td>
</tr>
<tr>
<td>/411</td>
<td>/813</td>
<td>/530</td>
<td>0/73</td>
<td>Market innovation</td>
</tr>
<tr>
<td></td>
<td>/875</td>
<td>/638</td>
<td>0/70</td>
<td>Learning-orientation</td>
</tr>
<tr>
<td></td>
<td>/798</td>
<td>/505</td>
<td>0/69</td>
<td>Market-orientation</td>
</tr>
<tr>
<td></td>
<td>/877</td>
<td>/705</td>
<td>0/80</td>
<td>Entreprenual view</td>
</tr>
</tbody>
</table>

The findings and conclusions of study
According to table-2 ,Measurement and structural model of study , Has a good Fitting. Naturally the assumptions will be approved when related path coefficients and it’s significant number (t. statistic) would be positive. if the significant number is higher than 1.65, the research hypothesis is confirmed to 90% confidence level , and if its numbers are higher than 1.96 or 2.58 , respectively , the research hypothesis are confirmed to 95% and 99% confidence levels.

Table3 :summary of hypothesis test results

<table>
<thead>
<tr>
<th>result</th>
<th>Significant number</th>
<th>Path coefficient</th>
<th>hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>confirmed</td>
<td>3/859</td>
<td>548</td>
<td>Knowledge absorption capacity—technological innovation</td>
</tr>
</tbody>
</table>
According to the results of current research, the production of knowledge capacity in organization can be a suitable guideline to create market and technological innovation. Therefore according to results, the production of knowledge absorption in organization cause production of innovation positively and enhancement of this capability in a positive way cause enhancement of innovation in organization. So the first and the second hypothesis of research is confirmed that is in accordance with results of this scholars researches: Chang, w & Lee, M (2008) and Gungor, B & Gozlu, O (2012) and (Carmen, N., & Jose, M2008). The results of current research shows this point that the production of entrepreneurial view in organization always cause improvement in technological innovation of organization and effort enhancement positively to improve or create entrepreneurial view cause creation of organizational innovation and can help organization in achieving competitive advantage. Hence the third hypothesis of research is confirmed that is in accordance with results of these scholars’ researches: Antoncic, B., & Scarlat, C. (2005) and Zehir, c & Muceldili, b & Zehir, s (2012). The positivity of path coefficient and significant number outside the range (58.2 / -58.2) for the forth hypothesis suggests that creation of entrepreneurial thinking in organization in confidence level of 99% cause improvement and creation of market innovation that finally, this significant and direct link creates a competitive advantage in organization based on production of market innovation that is in accordance with researches of Merwe, v. d. (2010).

Based on conducted studies, emphasis on production of market-orientation thinking in organization causes creation of technological innovation and creation of creative ideas about responding to market needs. Hence, based on 5th hypothesis in confidence level of 99%, enhancement of market-orientation thinking causes production of technological innovation positively. Moving in the negative direction or production of thinking based on lack of attention to market needs can reduce technological innovation in organization in a negative way and eventually, affects on reduction and increase of competitive advantage in organization. This result is in accordance with researches Panigyrakis, G & Theodoridis, P (2007). As expected, results show a significant relation between creation of market-oriented thinking and creation of market innovation. Therefore, increase in creation of market thinking in a positive way leads to creation of market innovation in a positive way that finally leads to creation of competitive advantage in organization. This result shows the confirmation of sixth hypothesis that is in accordance with researches of Kumar, V & Jones, E & Venkatesan, R & Leone, R (2010). The analyzes of research suggest that the creation of learning-oriented thinking in organization and
among organizational staff leads to creation of technological innovation and finally in products of organization, therefore, a significant and positive relation is anticipated between learning-oriented thinking and technological innovation that suggests the confirmation of 7th hypothesis and is in accordance with researches of Gunsel, A & Siachou, E & Acar, A (2011) & Wang, Y & D.Ellinger (2011). Positivity of path coefficient and significant number in 8th hypothesis indicates that there is a significant and positive relationship between creation of learning-oriented thinking in organization and creation of technological innovation. Hence increase in learning-oriented thinking leads to improvement of technological innovation in organization. On the other hand, reduction in view of learning-orientation in organization can lead to a reduction in technological innovation in organization. This result is in accordance with researches of Jimenez-Jimenez, D & Sanz Valle, R & Hernandez-Espallardo, M (2008).

Based on analysis of 9th hypothesis in a confidence level of 99%, we can conclude that improvement in technological innovation leads to creation or improvement of competitive advantage of the organization. Based on analysis of 10th hypothesis in confidence level of 99%, we can conclude that creation or improvement of technological innovation leads to creation or improvement of competitive advantage in organization. So according to positivity of path coefficient in this hypothesis, the positive relationship between these two variables is predictable. Also the results from this production of market innovation research can lead to creation of competitive advantage in organization. So according to positivity of relationship between these 2 variables, development in market innovation in positive or negative direction can lead to a change in competitive advantage of organization in positive or negative direction. Therefore the last hypothesis is confirmed that is in accordance with results of these scholars’ researches: Ren, L & Xie, G & Krabbendam, K (2010) and Ocas, A & Ngo, L. V (2011) Clulow, v (2003)

**Suggestions**

According to results, it is suggested to managers of surveyed institutions to collect and analyze environmental information with appropriate mechanisms, identify customers’ needs and preferences with true methods of market Research and by obtaining the required information, become a leader to innovative changes. In addition, it is suggested to these institutions to consider learning as an improvement key and an essential task in organization in order to move in innovation and competitive advantage direction through continuous learning. These institutions can achieve innovation via creating changes in design, assortment, pricing methods and effective advertisements. It is suggested to these institutions in order to improve and develop the product, they should use customers’ information through an appropriate mechanism, as these information being considered in new product and services planning to create customer value.

As mentioned, the sample of the current study were knowledge-based companies in Shiraz Paradise (knowledge and Science park of Fars). While other companies covered by this Park were neglected, so it is suggested to researches to study other incubators and analyze the results.

**References**

http://www.ijhcs.com/index.php/ijhcs/index


