A Consolidated Model for Knowledge and Innovation Management to Achieve Sustainable Competitive Advantages

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ABSTRACT

This paper presents a consolidated model for knowledge and innovation management in order to achieve sustainable competitive advantages. This is a practical research study as to the purpose and classified as descriptive research with regard to the way of gathering data. A convenience sample of 343 was selected by Cochran's theorem from a limited statistical population of 3200 employees working for the National Iranian South Oil Company (Ghachsaran). Data were collected by questionnaire with its reliability estimated by Cronbach's alpha coefficient. They were analyzed by SPSS and smart PLS. According to results, the fitness of the proposed model was found to be good; the variable of innovation should be though eliminated from the model.

KEY WORDS: Marketing Capability, Customer Relationship Management, Marketing Function.

INTRODUCTION

Competitive advantage is a management concept attracted great attention in current literature. Such importance is attributed to fast changing organizations, complications of the economic environment, the effects of globalization and unstructured markets, changing consumer needs, competition, IT and communication revolution, and global free trade.

To achieve the required updated knowledge and organizational competence, and to respond to the fast changing environment in order to benefit from sustainable competitive advantages, knowledge management, organizational innovation, and organizational agility should be considered capabilities simultaneously needed. Knowledge management has a key role in guaranteeing business success and competitive advantages by collecting and sharing experiences and information. The strategic importance and benefit of knowledge management is in properly identifying knowledge resources improving organization to achieve competitive advantages. On the other hand, although organizational innovation has not widely studied, it plays an important role in achieving and maintaining competitive advantages in a competition formed based on the economy, speed, and the rate of innovation.

The ability to easily, quickly and skillfully identify and respond to opportunities and environmental threats, organizational agility highlights three features including the speed of change, the ease of change and evaluation, and the environmental impression and response. It also emphasizes on the interaction between competitive requirements. Tis et al. pointed that in a dynamic environment, dynamic capabilities created a new framework in which the management skill quickly changed creativity, specialization, communication and technology, economic and trade environment. The situation of any organization depends on identifying market opportunities and organizing some processes to use such opportunities. Therefore, the power of matching resources and capabilities is a competitive factor of creating competitive advantages. The contribution of knowledge management and organizational innovation to achieve competitive advantages has been pointed out in literature. The effects of such approaches on benefiting sustainable competitive advantages have been separately examined in few studies. Dunport et al. argued that competitive advantages are based on the development of current capabilities to respond by maximum effect on organizational environment, whereas, some organizations are not capable of fast developing such features. It is, thus, necessary to apply organizational agility in order to increase the speed of responding to dynamic and competitive environment along with the features of knowledge.

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management and organizational innovation to achieve sustainable competitive advantages, which have been less studied. Regarding what mentioned above, no model based on knowledge management, organizational agility and organizational innovation has been considered in research on competitive advantages based on dynamic capabilities. This research, therefore, aims to present an integrated model established upon knowledge management, organizational innovation, and organizational agility to achieve sustainable competitive advantages. Here, the role and the effect of these three approaches are explained at the same time with sustainable competitive advantage and the interrelation of the above approaches.

Research Literature:
Knowledge Management:

It is not clear how knowledge management has emerged in origin. It has been in human life since the very beginning of living, even in hunting era. Human being has always strived for gathering and communicating his/her knowledge and information on life matters. By development of human knowledge and experiences without a systematic method, the knowledge was gradually transferred from a generation to another. In recent historical periods, knowledge was managed to satisfy community needs. In recent decades, knowledge management has become an important subject for practitioners in this field (Wickramasinghe, 2006). Knowledge management has been defined in several ways. Such different approaches concentrate on creating, spreading, storing, and applying the current and new knowledge (Canter, Kristin & Schmidt, and 2011: 1454). According to Gupta et al. (2000), knowledge management is a process helping organizations identify, select, organize, distribute, and communicate important information and necessary skills for activities (Zaid, et al., 2012).

Knowledge is differently classified one of well-established classifications of which introduced by Nonakabased on Polanyi's philosophy. Nonakarefers to two types of knowledge: implicit and explicit knowledge (Vedadi and Abdolalian, 2012).

A structured and relatively without ambiguity, explicit knowledge simply improves. It is concrete, logical, theoretical and systematic knowledge simply, quickly, and cost-effectively communicated. It is easier to achieve competitive advantage in the context of explicit knowledge. And it is not difficult to imitate it. Explicit knowledge is expressed formally by a systematic written knowledge, because it can be gathered and shared in the forms of data, formula, and rules. Knowledge is though a collective of awareness, vision, and internal insight that is difficult to express it semantically and audio visually. It is, therefore, hard to formalize, communicate, share, and prescribe it. Implicit knowledge though takes its root from individuals' practices, experiences, beliefs, values, and feelings acquired in their context. Given their requirements and conditions, authors, researchers and different institutes around the world have introduced different knowledge management models. Nonakaand Takeuchi (1995) classified knowledge conversion models leading by employees to the creation of organizational knowledge into four groups (Mihi, Rmiriz, et al. 2011), including socialization, externalization, combination, and internalization.

Innovation:

As the last remaining lever in the current world of business, innovation assists corporations to reduce their expenses, improve their performance, offer new products and services to the market, and achieve competitive advantage. Being a very complicated process, innovation is full of technical complications, interdisciplinary affiliations, lack of certainty, and complicated integrations. Innovation can be a new product or service, a manufacturing technology, a new producing method, or a new management strategy (Liao, Wu-Chen, & Chih-Tang, 2008).

Most successful innovations are achieved as a result of progressive changes in practical concepts and methodologies (Tushman, Nadler, 1986). Relying on creation, exploration, acquiring, and spreading out organizational knowledge and innovation, gathering human resource is a key to acquire sustainable competitive benefits in our ever-changing environment (Lemon and Sahota, 2004).

Theorists imply different types of innovation, including:

- Continuous innovations: encompassing trivial changes in behavior or products
- Dynamic continuous innovations: encompassing fundamental changes in consumers' behavior at the same time trivial changes in products
- discontinuous innovation: encompassing fundamental changes in consumers' behavior and products (Gobelli and Brown, 1987)

Flett divides innovation into two general groups: (1) Innovation in products or any change in products or services; and (2) innovation in processes or any change in the way of producing or offering products and services.

Variables such as organizational structure, culture and capability of human resource in creating innovation are of the most important effective factors (Ishaghi, 2008). According to literature, one important problem is the
way of judging the organizational effectiveness. A part of this problem is to determine the innovative performance and to offer a fair reward for it. Many managers find it difficult to evaluate the rate of innovation. It seems rather impossible at team or personal level. People's perception of innovative performance is strongly affected by cultural and philosophical differences. Thus, managers of internal units in different companies may have different perception of the innovative performance. In spite of this, most managers understand that using some indexes are more general for assessing the innovative performance of companies (Hans and Samhayn, 2008). Indexes such as the number of new products/services offered to market, the time interval from idea to market, the improvement of performance or cost reduction, and the numbers of registered inventions are mostly considered by managers.

Organizational Innovation Stages:

Studying models relating to innovation process, Saren (1984) suggested five types of innovation:

- Models for different parts of organization: some authors such as Robertson (1974) divided organizational innovation from the perspective of different parts of organization being responsible for individual stages. For example, innovation process first passes through these units: (1) research and development; (2) designing; (3) engineering; (4) production; and (5) marketing. Accordingly, innovation is studied in different units as an idea. Finally, it is offered to market as a new product/service.
- Models for different stages of activity: most authors such as Flett (1989) or Bayker and Macktavish (1976) analyze innovation using models for different stages of activity. In such case, organizational innovation is divided among different stages based on its necessary activities. For example, Kominkgz et al. (1978) argue that organizational innovation include the following stages: (1) searching for finding difficult resources; (2) presenting different designs to solve problems; (3) evaluating innovative solutions and new designs; (4) selecting or starting one or more series of solutions; (5) accepting and normalizing it.
- Models for decision-making stages: some authors divide organizational innovation into a series of consecutive decisions defined in each stage by a particular type of decision-making. For example, (1) gathering information to reduce uncertainties; (2) evaluating information; (3) decision-making; (4) defining and specifying the remaining key factors.
- Models for conversion process: in this case, innovation is considered as a system of inputs and outputs rather than a logical and ordered process. In such model, a technological innovation is considered as a process of converting inputs such as raw materials, scientific knowledge, and labor force to outputs such as new products (Towis, 1980).
- Reactive models: some authors such as Becker and Wisher (1967) consider innovation as an organizational reaction or response to external and internal stimuli (SoltaniTirani, 2008).

Agility:

As an emerging paradigm, organizational agility has been defined by scholars in various ways. Some call it a measure in a competitive environment arising from continuous changes, responding to market changes and creating value for products/services based on customers' satisfaction (Kim and Nimihard, 2010). By definition, agility is a combination of several companies with their own individual skills and competences having common operational cooperation. This enables associated institutes (with common profession) to match with and respond to changes according to customers' needs (Mackinskyve, 2012). Agility is a system with particular capabilities and competences allow organization to grow in a competitive environment (Doris, 2012). According to a comprehensive definition, an agile organization is a quick, consistent, and informed business able to quickly adapt itself to unexpected changes and events, market opportunities, and customers' needs (Nickpour and Berkam, 2011).

Agile organizations are concerned about changes, uncertainties and unpredictability of their business and need unique capabilities in order to manage changes, uncertainties and unpredictability of their environment. These capabilities include four main elements, which are a basis for maintaining and developing agility:
- Responsiveness: refers to the ability to find changes, quickly respond and take advantage of them.
- Competence: implies the ability to achieve organizational goals and objectives.
- Flexibility and adjustability: is an ability to direct different process and achieve different objectives using similar facilities.
- Speed: means an ability to do activities within the shortest possible time (Rajabzadeh and Shahabi, 2006).

Competitive Advantages:

Competitive advantage is directly associated with customers' expected values. As such the closer the organizational offered value to the customers’ expected value, the more advantages and superiority the organization would enjoy (Mehri and Hosseini, 2004). Competitive advantage includes a set of factors or capabilities always enabling companies to have a better performance than their competitors (Sadri and Lees, 2001). In other words, it is a factor or a set of factors making the organization more successful in a competitive
environment than others and competitors cannot easily imitate (Barney, 1999:99). To achieve competitive advantages, organizations should consider both their external situations and internal capabilities. Creating and maintaining competitive advantages requires competences creating value for customers by relying on organizational capabilities. Company’s sources include different types of assets, capabilities, organizational processes, information, knowledge, etc. controlled by company so that value-creating strategies are developed and implemented. These resources can be studied in three groups of tangible, intangible, and organizational capabilities (Aplivma, 2000).

Fig. 1: Conceptual Model.

Research Hypothesis:

First Hypothesis: knowledge management has significant positive effect on organizational innovation.
Second Hypothesis: knowledge management has significant positive effect on organizational agility.
Third Hypothesis: knowledge management has significant positive effect on competitive advantages.
Fourth Hypothesis: organizational agility has significant positive effect on competitive advantages.

MATERIALS AND METHODS

This is a practical research study as to the purpose and classified as descriptive research with regard to the way of gathering data. A convenience sample of 343 was selected by Cochran's theorem from a limited statistical population of 3200 employees working for the National Iranian South Oil Company (Ghachsaran). Data were collected by questionnaire with its reliability estimated by Cronbach's alpha coefficient at 0.881, 0.845, 0.929, and 0.887 respectively for competitive advantages, knowledge management, organizational agility, and innovation. Data were analyzed by SPSS and smart PLS. Given the research questions, they were descriptively analyzed. With respect to the nature of variables, structural equation modeling was employed to confirm or reject hypotheses. The significance level for all hypotheses was considered at 0.01.

Testing for Data Normality:

One of the main presuppositions of structural equation model is to study normal distribution of studying variables. To see if the sample belongs to a normal population, SPSS tests and statistical diagrams can be employed. One of these tests is the Kolmogorov–Smirnov test checking variable normality. You can see the results in table 1.

Table 1: Kolmogorov–Smirnov test results.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Kolmogorov–Smirnov Test</th>
<th>Significance Level</th>
<th>Situation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competitive Advantages (CA)</td>
<td>1.412</td>
<td>0.037</td>
<td>Abnormal</td>
</tr>
<tr>
<td>Knowledge Management (KM)</td>
<td>1.613</td>
<td>0.011</td>
<td>Abnormal</td>
</tr>
<tr>
<td>Organizational Agility (AO)</td>
<td>2.117</td>
<td>0.00</td>
<td>Abnormal</td>
</tr>
<tr>
<td>Innovation (INO)</td>
<td>1.892</td>
<td>0.002</td>
<td>Abnormal</td>
</tr>
</tbody>
</table>

H₀: data distribution is normal
H₁: data distribution is not normal

As the significance level (sig) is smaller than 5 percent for all variables, all variables were normally distributed. The hypothesis of normality was, thus, rejected. As the structural equations modeling was adopted, data were abnormal and the suitable software was SMARTPLS.

Studying External Research Model:

All research measurement models are of reflective kind. To study model reliabilities, one-dimensionality of models was checked by Cronbach's alpha (Azar et al., 2012). If Cronbach's alpha is greater than 0.70, the internal consistency and one-dimensionality of blocks are confirmed. In addition to Cronbach's alpha, the composite reliability is used in PLS models to check the reliability of internal consistency and one-dimensionality of blocks. If this measure, also known as P Dillon-Goldstein, is greater than 0.70, the composite reliability will be verified. The following table presents PLS outputs for these two measures.
Table 2: PLS outputs.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Cronbach's Alpha</th>
<th>Composite Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Agility (AO)</td>
<td>0.805</td>
<td>0.911</td>
</tr>
<tr>
<td>Competitive Advantages (CA)</td>
<td>0.917</td>
<td>0.930</td>
</tr>
<tr>
<td>Innovation (INO)</td>
<td>0.809</td>
<td>0.868</td>
</tr>
<tr>
<td>Knowledge Management (KM)</td>
<td>0.798</td>
<td>0.908</td>
</tr>
</tbody>
</table>

Regarding table 2, values obtained for Cronbach's alpha and composite reliability are greater than 0.70 showing the good reliability of research variables. Measurement models are acceptably reliable.

**Evaluating Validity of Measurement Models:**

Convergent validity is the first validity studied to if the measurement models are valid. Convergent validity means that a collective of definiens explain the main construct. Fornel and Larker (1981) suggested using average variance extracted (AVE) as a criterion of convergent validity. The least AVE 0.5 indicates the sufficient convergent validity. This means that a latent variable can averagely explain more than half of the dispersion of its definiens. Table 3 summarizes the calculation results of this measure.

Table 3: calculation results of average variance measure.

<table>
<thead>
<tr>
<th>Variable</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Agility (AO)</td>
<td>0.837</td>
</tr>
<tr>
<td>Competitive Advantages (CA)</td>
<td>0.551</td>
</tr>
<tr>
<td>Innovation (INO)</td>
<td>0.570</td>
</tr>
<tr>
<td>Knowledge Management (KM)</td>
<td>0.832</td>
</tr>
</tbody>
</table>

As observed in above table, AVE values obtained for latent variables are greater than 0.5 showing the good convergent validity of research variables. The second validity is discriminant validity. Here, the transverse loads test checking validity at defining level was used. Table 4 presents the transverse load test results.

Table 4: transverse loads.

<table>
<thead>
<tr>
<th>Research Constructs</th>
<th>Competitive Advantage</th>
<th>Innovation</th>
<th>Knowledge Management</th>
<th>Organizational Agility</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CA</td>
<td>INNO</td>
<td>KM</td>
<td>AO</td>
</tr>
<tr>
<td>Competitive advantage 1</td>
<td>CA1</td>
<td>0.718900</td>
<td>0.571534</td>
<td>0.371057</td>
</tr>
<tr>
<td>Competitive advantage 2</td>
<td>CA4</td>
<td>0.699919</td>
<td>0.525686</td>
<td>0.346429</td>
</tr>
<tr>
<td>Competitive advantage 3</td>
<td>CA7</td>
<td>0.696385</td>
<td>0.463209</td>
<td>0.449333</td>
</tr>
<tr>
<td>Competitive advantage 4</td>
<td>CA8</td>
<td>0.745824</td>
<td>0.463816</td>
<td>0.348820</td>
</tr>
<tr>
<td>Competitive advantage 5</td>
<td>CA9</td>
<td>0.750577</td>
<td>0.560471</td>
<td>0.402281</td>
</tr>
<tr>
<td>Competitive advantage 6</td>
<td>CA10</td>
<td>0.807740</td>
<td>0.595900</td>
<td>0.393690</td>
</tr>
<tr>
<td>Competitive advantage 7</td>
<td>CA11</td>
<td>0.767198</td>
<td>0.643408</td>
<td>0.493816</td>
</tr>
<tr>
<td>Competitive advantage 8</td>
<td>CA12</td>
<td>0.844825</td>
<td>0.675125</td>
<td>0.519921</td>
</tr>
<tr>
<td>Competitive advantage 9</td>
<td>CA13</td>
<td>0.752393</td>
<td>0.556286</td>
<td>0.403224</td>
</tr>
<tr>
<td>Competitive advantage 10</td>
<td>CA14</td>
<td>0.694209</td>
<td>0.498276</td>
<td>0.396079</td>
</tr>
<tr>
<td>Competitive advantage 11</td>
<td>CA15</td>
<td>0.672391</td>
<td>0.534568</td>
<td>0.268091</td>
</tr>
<tr>
<td>Innovation 1</td>
<td>IN1</td>
<td>0.579880</td>
<td>0.739621</td>
<td>0.452994</td>
</tr>
<tr>
<td>Innovation 2</td>
<td>IN2</td>
<td>0.477630</td>
<td>0.784855</td>
<td>0.511279</td>
</tr>
<tr>
<td>Innovation 3</td>
<td>IN3</td>
<td>0.554599</td>
<td>0.742964</td>
<td>0.439110</td>
</tr>
<tr>
<td>Innovation 4</td>
<td>IN4</td>
<td>0.590378</td>
<td>0.646203</td>
<td>0.389720</td>
</tr>
<tr>
<td>Innovation 5</td>
<td>IN5</td>
<td>0.614670</td>
<td>0.816977</td>
<td>0.580714</td>
</tr>
<tr>
<td>Coding Knowledge management</td>
<td>COKM</td>
<td>0.489619</td>
<td>0.556836</td>
<td>0.903866</td>
</tr>
<tr>
<td>Personalizing knowledge management</td>
<td>PRKM</td>
<td>0.497976</td>
<td>0.597364</td>
<td>0.920696</td>
</tr>
<tr>
<td>Facing changes</td>
<td>FC</td>
<td>0.755896</td>
<td>0.810613</td>
<td>0.799253</td>
</tr>
<tr>
<td>Virtual engagement</td>
<td>VR</td>
<td>0.894514</td>
<td>0.700463</td>
<td>0.509138</td>
</tr>
</tbody>
</table>

As seen above table, any defining load for each construct is greater than the load of that definen for other constructs. The model discriminant validity is, thus, confirmed.

**Model Fit:**

In PLS modeling, three indexes have been presented for model goodness of fit: cv-communality, cv-redundancy, and goodness of fit (GOF). Table 5 shows that cv-communality and cv-redundancy positive respectively indicating the good quality of measurement mode and the good quality of structural model. Positive GOF shows the general model fit.

After testing the external model and verifying the reliability and validity (research measurement models), the internal model or the research structural model was evaluated. Research hypotheses can be studied by internal model, implemented in SMART-PLS Graph. Table 2 illustrates the tested conceptual model in the
standard mode. Numbers written over lines are beta coefficients obtained by regression equation or route coefficient. Numbers in each circle show R2 of a model the predictor variables of which have been entered by an arrow in the circle.

Table 5: indexes for studying communality validity, redundancy validity and goodness of fit.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Communality</th>
<th>R2</th>
<th>Redundancy</th>
<th>GOF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Agility (AO)</td>
<td>0.837</td>
<td>0.518</td>
<td>0.429</td>
<td></td>
</tr>
<tr>
<td>Competitive Advantages (CA)</td>
<td>0.551</td>
<td>0.808</td>
<td>0.437</td>
<td></td>
</tr>
<tr>
<td>Innovation (INO)</td>
<td>0.570</td>
<td>0.401</td>
<td>0.228</td>
<td></td>
</tr>
<tr>
<td>Knowledge Management (KM)</td>
<td>0.832</td>
<td></td>
<td></td>
<td>0.401</td>
</tr>
<tr>
<td>Average</td>
<td>0.697</td>
<td>0.575</td>
<td>0.364</td>
<td></td>
</tr>
</tbody>
</table>

Fig. 2: research conceptual model in the standard mode.

T-value sub-index was employed to test the hypotheses significance. Table 3 indicates t-values for the research model.

Fig. 3: Research model in the standard mode.

As seen in the above figure and given the significance coefficients, since T-value should be smaller than -1.96 or greater than 1.96 in order to reject or confirm hypotheses, the parameter between two ranges is not seen as significance. This also shows that there is no significant difference between value calculated for regression weights and zero value at the level of 95 percent.

Testing Hypotheses:

First Hypothesis: knowledge management has significant positive effect on organizational innovation. Since T-value (21.896) is greater than 1.96, the correlation between two variables is found to be significant at the level of 95 percent. The null hypothesis is, thus, rejected. As knowledge management has a significant effect on organizational innovation, our hypothesis is confirmed.

Second Hypothesis: knowledge management has significant positive effect on organizational agility.
Since T-value (33.149) is greater than 1.96, the correlation between two variables is found to be significant at the level of 95 percent. The null hypothesis is, thus, rejected. As knowledge management has a significant effect on organizational agility, our hypothesis is confirmed.

Third Hypothesis: knowledge management has significant positive effect on competitive advantages.
Since T-value (0.383) is smaller than 1.96, the correlation between two variables is found to be not significant at the level of 95 percent. The null hypothesis is, thus, confirmed. As knowledge management has not a significant effect on organizational innovation, our hypothesis is not confirmed.

Fourth Hypothesis: organizational agility has significant positive effect on competitive advantages.
Since T-value (18.051) is greater than 1.96, the correlation between two variables is found to be significant at the level of 95 percent. The null hypothesis is, thus, rejected. As knowledge management has a significant effect on organizational innovation, our hypothesis is confirmed.
Therefore, innovation should be eliminated from the model and the issued should be retested. Accordingly, the following model is suggested:

Fig. 4: research modified model.

Regarding the above model and significance coefficients, testing results of the modified model has been presented as follows:

Fig. 5: research modified model in the standard mode.

Fig. 6: research modified model in T mode.

*Research Results:*

*First Hypothesis*
Since T-value (21.896) is greater than 1.96, the correlation between two variables is found to be significant at the level of 95 percent. The null hypothesis is, thus, rejected. As knowledge management has a significant effect on organizational innovation, our hypothesis is confirmed. Results agree with what Fabrizo (2009), Stok et al. (2001), Bicker and Piter (2000), Flore et al. (2004), Grimp and Sofka (2008), Flore et al. (2004), Yusefi et al. (2012), and Nikolas et al. (2011) found in this regard.
Second Hypothesis
Since T-value (33.149) is greater than 1.96, the correlation between two variables is found to be significant at the level of 95 percent. The null hypothesis is, thus, rejected. As knowledge management has a significant effect on organizational agility, our hypothesis is confirmed. Results agree with what Zanjirchi et al. (2009), BahramiNeghad et al. (2013), and Sadeghian and Ziglari (2014) found in this regard.

Third Hypothesis
Since T-value (0.383) is smaller than 1.96, the correlation between two variables is found to be not significant at the level of 95 percent. The null hypothesis is, thus, confirmed. As knowledge management has not a significant effect on organizational innovation, our hypothesis is not confirmed. Results do not agree with previous research findings. The variable of innovation is, therefore, eliminated from the proposed model.

Fourth Hypothesis
Since T-value (18.051) is greater than 1.96, the correlation between two variables is found to be significant at the level of 95 percent. The null hypothesis is, thus, rejected. As knowledge management has a significant effect on organizational innovation, our hypothesis is confirmed. Results agree with what Mohammadi et al. (2011), Shahgholi et al. (2013), BahramiNeghad et al. (2013), and Sadeghian and Ziglari (2014) found in this regard.

Suggestions:
According to results, the following suggestions are recommended:
Given the fast-development of knowledge and technology, customers' tastes are also increasingly changing. Managers in industries and companies are suggested to consider this important factor in advance so that they can achieve tangible profits and revenues and can improve their organization and help it survive.
Organizations are suggested to regard innovation as a vital empowering tool to create value and make the competitive advantage sustainable in a very dynamic environment with current increasing complications. In recent decades, we have observed a significant growth in the role of knowledge and innovation in economic activities in the international level.
Employees should be encouraged to take the initiative in solving organizational problems. Both employees and managers should engage in growth, learning and problem-solving related activities.
Managers should pay more attention to in-service trainings and improving employees' specialization and skills. They should offer reward to employees for learning more skills in order to motivate them to raise their occupational skills and specialization.
It is suggested to create organizational procedures and systems facilitating creativity and budget allocation in order to implement new ideas and thoughts.
It is suggested to provide all employees with necessary facilities for having easy access to information systems and creating an opportunity for all members to engage in decision-makings for making organization agile.
To reach a deep perception of the effect of research variables on competitive advantages, it is suggested to study the proposed model in areas other than oil companies. Developing theoretical models to explain other factors affecting research variables can create deeper insight into this context.

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