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Relationship between knowledge-based resources and innovation in the hotel industry

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ABSTRACT

Nowadays, organizations are increasingly face with dynamic and changing environment. Therefore, in order to survive and keep dynamics they must adapt to environmental changes. Innovation also recognized as the most important factor for survival of knowledge-known and technological companies. Knowledge is considered as the basis and most important factor for competition. According to the study, the aim of this study is to investigate the relationship between knowledge-based resources and innovation in the hotel industry of Guilan. This research is descriptive research and is functional in terms of objective. The population of the research includes all hotels of Guilan province. Given that the population is limited and available, sample size of this study is the same as the number of population with 128 hotels that used census method. Data collection was conducted by a standard questionnaire. The data were analyzed using SPSS19 software in both descriptive and inferential statistics. The results of the research indicate a significant relationship between knowledge-based resources and innovation. Finally, some recommendations have been proposed to improve the knowledge according to the results of hypotheses.

1. Introduction

Organizational innovation is very important, because it can provide them with sustainable competitive advantage (Weerawardena, 2009). Many organizations in their environment faced with many competitive problems. These problems occur by rapid changes in the environment, especially technological change. In this regard, managers and employees must use the power of creativity and innovation in order to adapt and keep pace with rapid changes, product lines, managerial practices and production processes (Hazlett, 2005).

Among the most essential characteristics of intelligent organizations in twenty-first century is the emphasis on knowledge and information. Organizations today are high-tech and required to business knowledge, management and exploitation of knowledge and information to improve efficiency, manage and track inexhaustible changes. Knowledge is a powerful tool that can make a difference in the world and make innovation possible (Chase, 1998). Thus, the importance of knowledge in today's complex global environment cannot be ignored (Jamshidi AA, 2015; Avazzadeh E, 2015; Hassas Khalasi and Mahfoozi, 2015; Karimzadeh Ardebil et al., 2015). Knowledge management along with human resources management and support management information systems create the value in the organization. To identify and providing its infrastructure is requirements for knowledge management. Otherwise, knowledge management is considered as the key for development and national economy. However, in many organizations, knowledge management is seen as a sub- procedure. This perspective is mainly due to the non-tangible added value of knowledge management in the short term and this led to innovation (Houghton et al., 2014).

Knowledge management performance, particularly knowledge distribution is effective on innovation and financial success of organizations (Wong, 2005). Many innovation studies have shown that innovation will improve by integrating knowledge within and outside the organization. Grant (2014) argues that one way of promoting continuous innovation is the ability of companies in reshaping organizational knowledge. The other role of knowledge management in innovation process can be noted to facilitate cooperation between organization task borders, helping to build capacity, capability and reduced complexity in innovation process (Konjkav Monfared and Ardakani, 2014).

After explaining the problem in the study population, this study is trying to examine the relationship between knowledge and innovation

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sources in hospitality companies. The dependent variable in this research is innovation (products, processes, marketing, and organization) and the independent variable in this study is the knowledge resources (social capital, procedural knowledge, declarative knowledge, external social relations) and firm size and age is considered as control variables. The question raised in this research is that whether there is knowledge-based resources and innovation in the hotel industry of Guilan?

2. Theoretical framework

The model is localized model of Nieves et al. (2014). It aims to investigate the relationship between knowledge-based resources and innovation in the hotel industry of Guilan. In this regard, after interviews with managers of Guilan hotels and to identify factors affecting innovation the localized model was presented in Fig. 1.

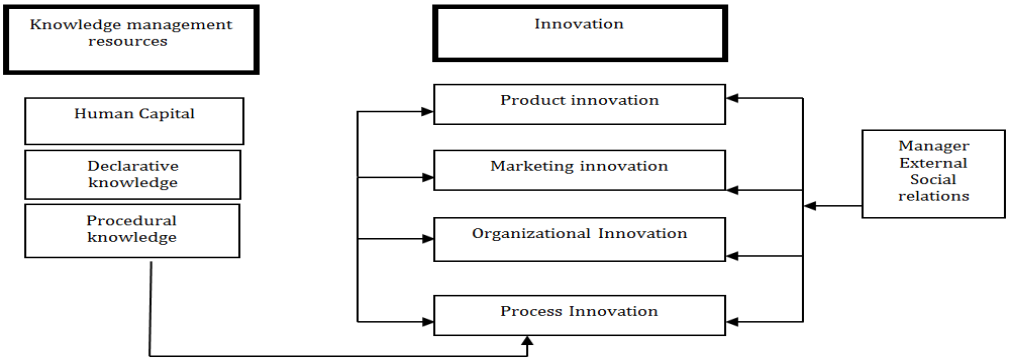

Fig. 1: Conceptual model (Julia Nieves et al., 2014)

3. Research hypotheses

1: human capital has a positive relationship with product innovation.
2: Human capital has a positive relationship with the innovation process.
3: Human capital has a positive relationship with marketing innovation.
4: human capital has a positive relationship with organizational innovation.
5: Declarative knowledge has a positive relationship with product innovation.
6: Declarative knowledge has a positive relationship with process innovation.
7: Declarative knowledge has a positive relationship with marketing innovation.
8: Declarative knowledge has a positive relationship with organizational innovation.
9: Procedural knowledge has a positive relationship with process innovation.
10: Manager external social relations have a positive relationship with product innovation.
11: Manager external social relations have a positive relationship with process innovation.
12: Manager external social relations have a positive relationship with marketing innovation.
13: Manager external social relations have a positive relationship with organizational innovation.

4. Literature survey

Elahi et al. (2015) examined the impact of process capabilities of knowledge management on innovation performance with the mediating effect of high-tech innovation process in organizations. The main objective of the study is to evaluate the process capabilities of knowledge management on innovation performance with the mediating effect of high-tech innovation process in organizations. Research method is descriptive survey. The population of the research is 285 research and development units of high-tech Company located in Tehran. To evaluate the effects of variables, structural equation modeling and in particular path analysis method was used. The results approved two hypotheses related to significant effects of the process capabilities of knowledge management on innovation process and innovation performance. But the hypothesis of a significant impact of the innovation process on innovation performance and in turn indirect effect of process capabilities of knowledge management on innovation performance were not approved.

Nieves et al. (2014) investigate the knowledge-based resources and innovation in services industry. The aim of this paper is to provide empirical evidence about the role of knowledge-based resources play in the determination of innovation activities in hospitality tourism companies. Data from 109 in Spain Hotels Company showed that intangible assets, in fact the company innovation description should be considered in this case. The results showed that there is no significant difference for each variable.

Veugelers (1997) in a study examines the lack of capabilities to accelerate and promote knowledge resources and innovation. The aim of this study was to investigate how to combine organizational variables and its positive impact on innovation through the creation of knowledge. The results showed that the dimensions of knowledge management have a significant impact on innovation.

5. Methods, population, statistical samples

The present study is descriptive-analytical and correlational study. The population of the study is 128 of Guilan 3, 4 and 5 star hotels which were selected by census method

6. Data collection and data analysis methods

The study was conducted using a questionnaire (Table 1)**.** Inventory is closed question with a five-item Likert scale that has been prepared for knowledge resources, innovation and level of managers' external social relationship as a mediator variable in standard questionnaire (Huselid, 2014). To analyze the data, descriptive and inferential statistical methods was used and for research hypotheses testing, SPSS19 have been used.

Table 1: Questions structure

Number of questions	knowledge resources variable
1-5	human capital
6-9	Declarative knowledge
10-12	Procedural knowledge
Number of questions	Innovation variable
13-17	Product innovation
18-23	Process innovation
24-28	Marketing innovation
29-32	Organizational innovation
33-41	Manager external social relations

7. Determination of validity and reliability

To determine the validity of this study, the opinions of experts and specialists in the field of management as well as the supervisor have been used**.** In this study, to determine reliability with an emphasis on internal consistency, Cronbach's alpha was used that calculated by SPSS software for complex questions associated with each variable (Table 2, 3, 4 and 5).

8. Conclusion

In relation to the first hypothesis can be said that the correlation between two variables of human capital and innovation is +0.306 percent that indicating the direct relationship between human capital and innovation. Meanwhile, the coefficient of determination between human capital and innovation is equal to 0.093. This shows that innovation variable (independent variable) can predict human capital (the dependent variable) as much as 9.3 percent. As a result, the hypothesis of "human capital has a positive relationship with product innovation" is confirmed that is consistent with the research conducted by Dwyer and Edwards (2009) and also Ordanini and Parasuraman (2011) that human capital (employees) are the important factors in innovation.

In relation to the second hypothesis can be said that the correlation between two variables of human capital and process innovation is +0.291 percent that indicating the direct relationship between human capital and process innovation. Meanwhile, the coefficient of determination between human capital and process innovation is equal to 0.084. This shows that process innovation variable (independent variable) can predict human capital (dependent variable) as much as 8.4 percent. As a result, the hypothesis of "human capital has a positive relationship with process innovation" is confirmed that is consistent with the research conducted by Monfared and Ardakani (2014) that increase human capital capabilities in organizations cause to maintain and improve the innovation performance of technical and administrative process.

In relation to the third hypothesis can be said that the correlation between two variables of human capital and marketing innovation is +0.185 percent that indicating the direct relationship between human capital and marketing innovation. Meanwhile, the coefficient of determination between human capital and marketing innovation is equal to 0.02. This shows that marketing innovation variable (independent variable) can predict human capital (dependent variable) as much as 2 percent. As a result, the hypothesis of "human capital has a positive relationship with marketing innovation" is confirmed that is consistent with the research conducted by Dalirpour and Yaghoubi (2013) that human capital impact on organizational learning and marketing innovation.

In relation to the fourth hypothesis can be said that the correlation between two variables of human capital and organizational innovation is +0.304 percent that indicating the direct relationship between human capital and organizational innovation. Meanwhile, the coefficient of determination between human capital and organizational innovation is equal to 0.092. This shows that organizational innovation variable (independent variable) can predict human capital (dependent variable) as much as 9.2 percent. As a result, the hypothesis of "human capital has a positive relationship with organizational innovation" is confirmed that is consistent with the research conducted by Kyriakopoulos (2011) that staff can facilitate the implementation of changes in the organization and resistant organizations against the development.

In relation to the fifth hypothesis can be said that the correlation between two variables of declarative knowledge and product innovation is +0.287 percent that indicating the direct relationship between declarative knowledge and product innovation. Meanwhile, the coefficient of determination between declarative knowledge and product innovation is equal to 0.082. This shows that product innovation variable (independent variable) can predict declarative knowledge (dependent variable) as much as 8.2 percent. As a result, the hypothesis of "declarative knowledge has a positive relationship with product innovation" is confirmed that is consistent with the research conducted by Keskin (2009) that declarative knowledge can be used in

many areas and declarative knowledge can enhance a company's ability to create new products.

Table 2: Percentage of alpha; the reliability of variables

Percentage of alpha	Variables
0.825	human capital
0.814	Declarative
0.804	Procedural
0.878	Knowledge
0.897	product
0.742	Process
0.860	Marketing
0.836	Organizational
0.910	Innovation
0.881	Social Relations

In relation to the sixth hypothesis can be said that the correlation between two variables of declarative knowledge and process innovation is +0.431 percent that indicating the direct relationship between declarative knowledge and process innovation. Meanwhile, the coefficient of determination between declarative knowledge and process innovation is equal to 0.082. This shows that process innovation variable (independent variable) can predict declarative knowledge (dependent variable) as much as 8.2 percent. As a result, the hypothesis of "declarative knowledge has a positive relationship with process innovation" is confirmed that is consistent with the research conducted by Hjalager (2010) that dimensions of knowledge management (declarative knowledge and procedural) associated with process innovation.

Table 3: Kolmogorov-Smirnov test for the study variables

	Test Static	Sig
Human capital	1.347	0.052
Declarative knowledge	1.120	0.163
Procedural knowledge	1.253	0.059
Product innovation	1.134	0.153
Process innovation	1.249	0.088
Marketing innovation	1.127	0.158
Organizational innovation	1.160	0.136
Manager external social relations	0.934	0.347

Table 4: Variables description

Descriptive statistics Variable	Number	Min	Max	Mean	Sd.	Variance
Human capital	120	1	4.4	2.6650	0.63201	0.399
Declarative knowledge	120	1	4.5	2.6875	0.69832	0.488
Procedural knowledge	120	1	4.33	2.6500	0.73824	0.545
Product innovation	120	1	4.6	2.6200	0.67233	0.452
Process innovation	120	1	4.5	2.5264	0.54490	0.297
Marketing innovation	120	1	4.6	2.6450	0.61053	0.373
Organizational innovation	120	1	4.25	2.5208	0.65110	0.424
Manager external social relations	120	1	3.89	2.9157	0.53063	0.282

Table 5: Hypotheses testing

Variables	No.	Correlation coefficient (R)	Coefficient of determination (R2)	**Sig**	Result
Human capital and innovation	120	0.306	0.093	0.001	Confirmed
Human capital and process innovation	120	0.291	0.084	0.001	Confirmed
Human capital and marketing innovation	120	0.185	0.034	0.042	Confirmed
Human capital and organizational innovation	120	0.304	0.092	0.001	Confirmed
Declarative knowledge and Product innovation	120	0.287	0.082	0.001	Confirmed
Declarative knowledge and process innovation	120	0.431	0.018	0.000	Confirmed
Declarative knowledge and marketing innovation	120	0.524	0.274	0.000	Confirmed
Declarative knowledge and organizational innovation	120	0.248	0.061	0.006	Confirmed
Procedural knowledge and process innovation	120	0.273	0.074	0.003	Confirmed
Manager external social relations and Product innovation	120	0.191	0.036	0.047	Confirmed
Manager external social relations and process innovation	120	0.210	0.044	0.038	Confirmed
Manager external social relations and marketing innovation	120	0.099	0.009	0.445	Rejected
Manager external social relations and organizational innovation	120	0.116	0.013	0.858	Rejected

In relation to the seventh hypothesis can be said that the correlation between two variables of declarative knowledge and marketing innovation is +0.524 percent that indicating the direct relationship between declarative knowledge and marketing innovation. Meanwhile, the coefficient of determination between declarative knowledge and marketing innovation is equal to 0.274. This shows

that marketing innovation variable (independent variable) can predict declarative knowledge (dependent variable) as much as 27.4 percent. As a result, the hypothesis of "declarative knowledge has a positive relationship with marketing innovation" is confirmed that is consistent with the research conducted by ORiordan (2013) that dimensions of knowledge management (declarative knowledge and procedural) associated with marketing innovation.

In relation to the eighth hypothesis can be said that the correlation between two variables of declarative knowledge and organizational innovation is +0.248 percent that indicating the direct relationship between declarative knowledge and organizational innovation. Meanwhile, the coefficient of determination between declarative knowledge and organizational innovation is equal to 0.061. This shows that organizational innovation variable (independent variable) can predict declarative knowledge (dependent variable) as much as 6.41percent. As a result, the hypothesis of "declarative knowledge has a positive relationship with organizational innovation" is confirmed that is consistent with the research conducted by Keskin (2009) that declarative knowledge can develop an opportunity to proper implementation of enterprise environments.

In relation to the ninth hypothesis can be said that the correlation between two variables of procedural knowledge and process innovation is +0.273 percent that indicating the direct relationship between procedural knowledge and process innovation. Meanwhile, the coefficient of determination between procedural knowledge and process innovation is equal to 0.074. This shows that process innovation variable (independent variable) can predict procedural knowledge (dependent variable) as much as 7.4 percent. As a result, the hypothesis of "procedural knowledge has a positive relationship with process innovation" is confirmed that is consistent with the research conducted by Akgün et al. (2008) that dimensions of knowledge management (procedural and declarative) are related to process innovation.

In relation to the tenth hypothesis can be said that the correlation between two variables of manager external social relations and product innovation is +0.191 percent that indicating the direct relationship between manager external social relations and product innovation. Meanwhile, the coefficient of determination between manager external social relations and product innovation is equal to 0.36 This shows that product innovation variable (independent variable) can predict manager external social relations (dependent variable) as much as 3.6 percent. As a result, the hypothesis of " manager external social relations has a positive relationship with product innovation" is confirmed that is consistent with the research conducted by Miller (2007) that knowledge from outside organizational boundaries can provide a potential to a new combination of knowledge that cause to development of innovation**.**

In relation to the eleventh hypothesis can be said that the correlation between two variables of manager external social relations and process innovation is +0.191 percent that indicating the direct relationship between manager external social relations and process innovation. Meanwhile, the coefficient of determination between manager external social relations and process innovation is equal to 0.044 This shows that process innovation variable (independent variable) can predict manager external social relations (dependent variable) as much as 4.4 percent. As a result, the hypothesis of " manager external social relations has a positive relationship with process innovation" is confirmed that is consistent with the research conducted by Bell (2005) that the external factors may use personal relationships to create innovation process**.**

In relation to the twelfth hypothesis can be said that Sig=0.445>0.05**,** so H0 is approved and H1 is rejected by 95% Confidence level and this relationship is not significant. As a result, the hypothesis of "manager external social relations have a positive relationship with marketing innovation" is rejected. Many studies by Dyer and Singh (1998) and Frost (2001) showed that external resources of knowledge are very important for the development of successful marketing innovation. So it is consistent with the hypothesis that manager external social relations have a positive relationship with marketing innovation.

In relation to the thirteenth hypothesis can be said that Sig=0.858 >0.05**,** so H0 is approved and H1 is rejected by 95% Confidence level and this relationship is not significant. As a result, the hypothesis of "manager external social relations have a positive relationship with organizational innovation" is rejected. Many studies by Capaldo (2007) are not consistent with the hypothesis that manager external social relations have a positive relationship with organizational innovation.

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