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Study of the Effect of Knowledge Management on Financial and Innovation Performance in Fledgling Businesses

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ABSTRACT

Nowadays, the knowledge has become a significant factor in success and competitiveness power of organizations and knowledge management (KM) has been considered as one the current organizational subjects within management science. Those organizations that perform based on tangible organizational advantages such as money, machineries, equipment, etc. in business scene, are not able to achieve competitive advantage in a knowledge-based economy. Statistical population of this study consists of all managers and experts of fledgling businesses in Tehran, Iran; of them, 70 managers of fledgling businesses were chosen to fill out questionnaires. In this research, knowledge management is divided into four variable including knowledge creation, knowledge storage, knowledge transfer, and knowledge usage. Smart Pls Software has been applied for data analysis. Results obtained from this study indicated that knowledge creation and knowledge usage have a positive and significant effect on financial performance; also, knowledge usage has a positive and significant effect on innovation performance. In fact, knowledge usage has a positive significant effect on both financial and innovation performances.

Keywords: Knowledge Management (KM), Innovation Performance, Financial Performance, Fledgling Businesses.

1. INTRODUCTION

Regarding the vital economic and social role of fledgling businesses in today's competitive environments, evaluation of performance and factors affecting it is one of considerable issues among researches and policy-makers in entrepreneurship field (Murphy et. al., 1996). Knowledge management (KM) is one of factors affecting fledgling businesses.

Knowledge-based business requires a method a system that encompasses intangible organizational assets such as knowledge and competency of individuals, innovation, customer relationship, organizational culture, systems and processes, organizational structure, etc. understanding and exploitation from these crucial intangible resources would lead to competitive advantage obtaining and maintenance by organizations. The most successful organizations would employ intangible assets better and faster within a knowledge-based economy. Studies have indicated that contrary to reduction in yield of traditional resources (such as money, land, machineries, etc.), intangible organizational assets are resources used to increase business performance. The significant point here is that the market has recognized the value of knowledge and other intangible assets within value creation process during long term. The level of these “hidden values” is increasingly changing (Rezaian et. al., 2009).

Innovation has a long history so that none of historians could estimate the first human innovation. Some states, the primitive human innovations have been objects made of stone and used for hunting; however, these sayings are not anything more than a guess. Although wheel is introduced as the first invention in many of texts and books, it should be noted that the wheel is not the first human invention, but it is called as the first invention of human due to its importance role in development trend of human (Talebi, 2006). In case of importance of innovation, it can be stated that all human progresses and promotions are because of innovation and discovery of new methods to do actions. It can be found based on the history of scientific advancements that great inventors such as Bell, Morse, Kato, etc. could change the life of human with their innovations. Innovation means manufacturing or creating a new extracted object. Halt introduced innovation in framework of scientific concept. In fact, he tended to identify factors affecting economic growth and the found the crucial role of innovation in development of countries. Halt explained innovation phrase as a deep concept and a process to use relevant knowledge or information in order to create or introduce new and beneficial things; therefore, the innovation can be generally defined as any new practical idea in an organization, industry, nation or the world (Hosseini, 1999). Innovation is defined as successful implementation of new ideas. In opinion of some researchers, innovation is associated with change and is defined as creation and commercialization of new knowledge. Moreover, innovation means introduction of new methods in which, individuals and organizations change the environment and themselves. The domain of innovations has been expanded from product and service level to organization and society level (Amabile, 1998).

2. THEORETICAL LITERATURE

Knowledge Management Definitions

Knowledge management is a concept with many definitions. Some have highlighted process-based specification of KM and mentioned its effect in their definitions.

Nickel King considers KM as a process of creation, organizing, promotion and assurance of perception of required information within doing a task (King, 1999, P. 43).

Stamp has considered KM more practically considering an active role for knowledge managers. He defines KM as preparation of required knowledge in required time and place for a person who needs it. He also believes that having knowledge about something is not necessarily the best thing but also the best thing is that we know the way to access the knowledge (Stamp, 1999, P. 83).

Knowledge Management is a process in which, organization produces wealth using its intellectual asset (Bukowitz & Williams, 1999, P. 27).

KM is introduced as the process to create, evaluate, represent, distribute and use knowledge (Bahatt, 2001, P. 56).

KM is a planned and organized program to create, share, store and use knowledge as an organizational asset in order to promote empowerment, speed and effectiveness of organization within providing products and services to customers (Plessis, 2008, P. 18).

However, the definition considered at this study is definition expressed by Nonaka and Takeuchi (1995) that is one of most applied definitions. They believe that there are two types of explicit and implicit (tacit) knowledge in organizations. Poolani (1996) distinguished between explicit and tacit knowledge for first time and then Nonaka and Takeuchi stated that some points including vision, observation, guess, unconscious sense, values, imaginations, metaphors, and comparisons have been forgotten in organizations and companies (Nonaka, 1994, P. 19).

Knowledge Management Advantages

1. Frugalities, efficiencies and processes will be done more efficiently eliminating recreation of doing methods (Liu et. al., 2013).
2. New opportunities and markets are determined (Satyendra & Andrew, 2013).
3. Change and innovation so that organization can identify changes reacting to them properly and changing themselves correctly (Atapattu et. al., 2014).
4. Better usage of human resources, organization can exploit from human resources more efficiently (Liu et. al., 2013).
5. Process speed, KM would enable organizations to reduce time cycle, decrease process time, because delays caused by recreation of doing methods are eliminated; moreover, detailed knowledge of processes enables employees to optimize processes (Inkinen et. al., 2015).
6. Continuity, KM is an effective strategy particularly in organizations and industries with high level of staff replacement so that they can transfer knowledge of experienced employees to new ones; in this regard, work continuity is maintained. For instance, knowledge bases of customers would enable new computational agent to examine customers rapidly continuing the work process of previous computational agent (Satyendra & Andrew, 2013).

Role of KM in Organizations

Nowadays, the role of knowledge as a vital resource for competitiveness and profitability has been emphasizing in management and economy literatures (Nonaka, 1994, P. 16).

Knowledge management helps organizations to have effective knowledge process. Organizations should benefit from existing knowledge and new knowledge created and KM contributes to choose the right market. However, companies should note that establishment of each system in organization has its specific

preparations in each organization so that the process might not be successful without such preparations (Salavati & Hagh Nazar, 2009, P. 34).

KM in new era does not only confined to coded and documented knowledge and many of organizations and companies all around the world are about to promote their competitive position, increase effectiveness as well as efficiency emphasizing on their explicit and implicit knowledge (Sohrabi et. al, 2015, p. 396). To achieve these goals, KM tends to capture knowledge, wisdom and experience with value added of employees in order to implement, restore and maintain knowledge as organizational asset. Undoubtedly, knowledge in now the most important competitive tool in present and future markets. Although numerous organizations have successfully invested in knowledge development at different level, there have been many organizations have failed in this field. Lack of correct mechanisms for KM implementation and evaluation has changed this kind of investment as an extra cost in viewpoint of managers (Rezaian et. al., 2009, P. 20).

Nowadays, knowledge creation and usage is essential for competitiveness and survival of organizations and industries. Knowledge cannot be stored and captured simply like other resources and is not as simple as them managed and used systematically. Information Technology (IT) has had the highest share in KM in majority of organizations in Iran such as different sectors of oil industry so that IT has been the basic component of all KM activities. However, it should be noted that information process technology is not the only factor of KM and evolution in decision-making processes, organizational structure and doing method of affairs are other factors of KM. knowledge-based organizing can be distinguished from organizing based on traditional competitive advantages (Badri Azarin et. al., 2013, P. 177).

Definitions and Importance of Innovation

Innovation has a long history so that none of historians could estimate the first human innovation. Some states, the primitive human innovations have been objects made of stone and used for hunting; however, these sayings are not anything more than a guess. Although wheel is introduced as the first invention in many of texts and books, it should be noted that the wheel is not the first human invention, but it is called as the first invention of human due to its importance role in development trend of human (Talebi, 2006).). In case of importance of innovation, it can be stated that all human progresses and promotions are because of innovation and discovery of new methods to do actions. It can be found based on the history of scientific advancements that great inventors such as Bell, Morse, Kato, etc. could change the life of human with their innovations.

Innovation means manufacturing or creating a new extracted object. Halt introduced innovation in framework of scientific concept. In fact, he tended to identify factors affecting economic growth and the found the crucial role of innovation in development of countries. Halt explained innovation phrase as a deep concept and a process to use relevant knowledge or information in order to create or introduce new and beneficial things; therefore, the innovation can be generally defined as any new practical idea in an organization, industry, nation or the world (Hosseini, 1999). Innovation is defined as successful implementation of new ideas. In opinion of some researchers, innovation is associated with change and is defined as creation and commercialization of new knowledge. Moreover, innovation means introduction of new methods in which, individuals and organizations change the environment and themselves (Porter & Ketels, 2003). The domain of innovations has been expanded from product and service level to organization and society level.

Therefore, creative person might not be innovator. It means that such person can have new and modern ideas without ability to present or sell them. Hence, innovator person is usually creative but creative individuals are not necessarily innovator. Generally, creativity is generation of new and beneficial ideas and innovation is successful implementation of such ideas ((Amabile, 1998).

Innovation is defined as:

- Creative ability of knowledge management to meet market demand and other social needs
- Purposeful and organized search for changes (systematic innovation)
- Process of collecting any kind of new and beneficial idea and formation of idea as well as formation, adoption and implementation of new ideas within processes, products, and services
- Creation and implementation of new ideas (Abdi, 2008).

Creativity and innovation are the most two important factors associated with advancements and development of communities so that identification of these factors contributes to fostering and booming of creativity and innovation. The present study aims at identifying factors related to creation and innovation among youth.

3. METHODOLOGY

This is an applied research in terms of objective, a descriptive research in terms of data collection and a survey study. Statistical population of study consists of managers, experts, and employees of fledgling companies and businesses in Tehran, Iran. Also, managers and experts of 70 fledgling businesses have been chosen to fill out questionnaires.

Research Hypotheses

Hypothesis 1: Knowledge creation has a positive and significant effect on financial performance of fledgling businesses.

Hypothesis 2: Knowledge storage has a positive and significant effect on financial performance of fledgling businesses.

Hypothesis 3: Knowledge transfer has a positive and significant effect on financial performance of fledgling businesses.

Hypothesis 4: Knowledge usage has a positive and significant effect on financial performance of fledgling businesses.

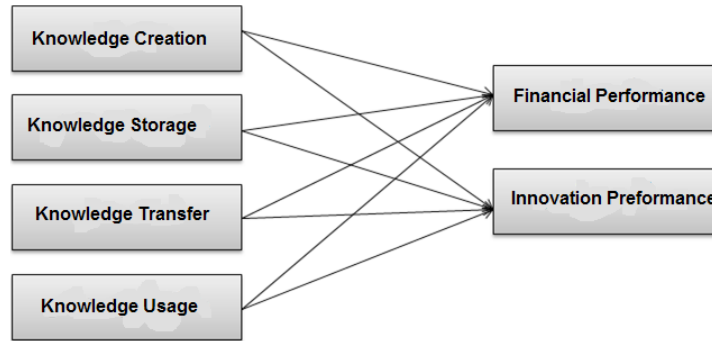
Hypothesis 5: Knowledge creation has a positive and significant effect on innovation performance of fledgling businesses.

Hypothesis 6: Knowledge storage has a positive and significant effect on innovation performance of fledgling businesses.

Hypothesis 7: Knowledge transfer has a positive and significant effect on innovation performance of fledgling businesses.

Hypothesis 8: Knowledge usage has a positive and significant effect on innovation performance of fledgling businesses.

Research Conceptual Model



4. RESEARCH CONCEPTUAL MODEL

Analysis of Research Data and Finding

This section is related to evaluation of measurement model and structural model of study. Research hypotheses have been studied herein and Smart PIs Software has been applied for data analysis.

Measurement Model Evaluation

Evaluation of measurement model includes two main parts. Reliability of variables is examined using Cronbach’s alpha. According to results of table 2, Cronbach’s alpha of all variables are above 0.7; therefore, the considered variables are reliable. If Average Variance Extracted (AVE) of each variable is above 0.5, convergence validity of model will be approved and each variable will cover more than half of deviations of its indicator. According to the results obtained from table 1, all values are above 0.5; hence, convergence validity of measurement model is approved.

Figure 1 indicates research model at standard mode.

Table 1 consists of research variables, items of each of variables, factor loads of these items (variable validity) and reliability using Cronbach’s alpha and variance mean.

Table 1
Variables, Items, Factor Loads (Variable validity), Research Reliability, and Variance Mean

<i>Variable</i>	<i>Questions</i>	<i>Factor Load</i>	<i>Variance mean</i>	<i>Cronbach's alpha</i>
Knowledge creation	AQ1	0.822	0.794	0.866
	AQ2	0.836		
	AQ3	0.707		
	AQ4	0.613		
Knowledge storage	BQ1	0.599	0.803	0.882
	BQ2	0.842		
	BQ3	0.892		
	BQ4	0.767		

(Contd...)

Variable	Questions	Factor Load	Variance mean	Cronbach's alpha
Knowledge Transfer	CQ1	0.790	0.797	0.862
	CQ2	0.788		
	CQ3	0.810		
	CQ4	0.869		
Knowledge usage	DQ1	0.831	0.816	0.892
	DQ2	0.866		
	DQ3	0.915		
	DQ4	0.495		
Financial Performance	EQ1	0.791	0.781	0.843
	EQ2	0.718		
	EQ3	0.815		
Innovation Performance	FQ1	0.880	0.895	0.935
	FQ2	0.914		

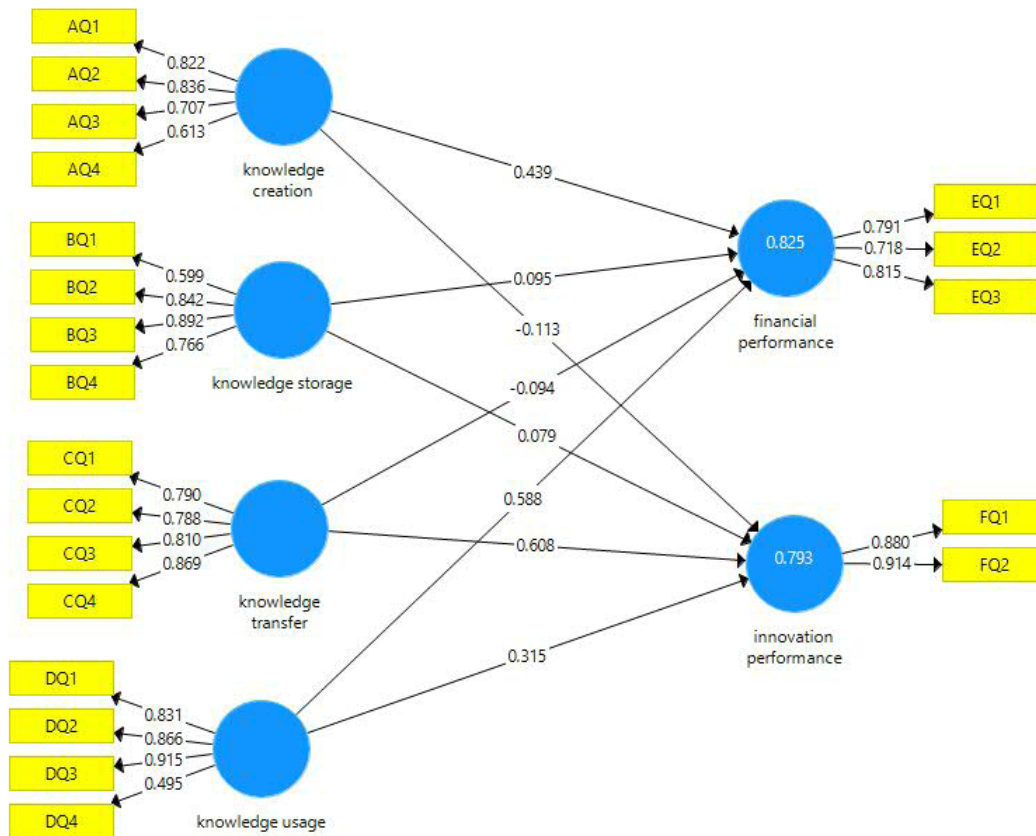


Figure 1: Research Model at standard mode

Evaluation of Research Structural Model

Research hypotheses are tested using BT algorithm through SMART PLS Software. Results obtained from structural model evaluation have been indicated in Table 2. Results of Table 3 show that hypotheses 1, 4, 7, and 8 have been accepted and hypotheses 2, 3, 5, and 6 have been rejected.

Figure 2 indicates research model at significance mode.

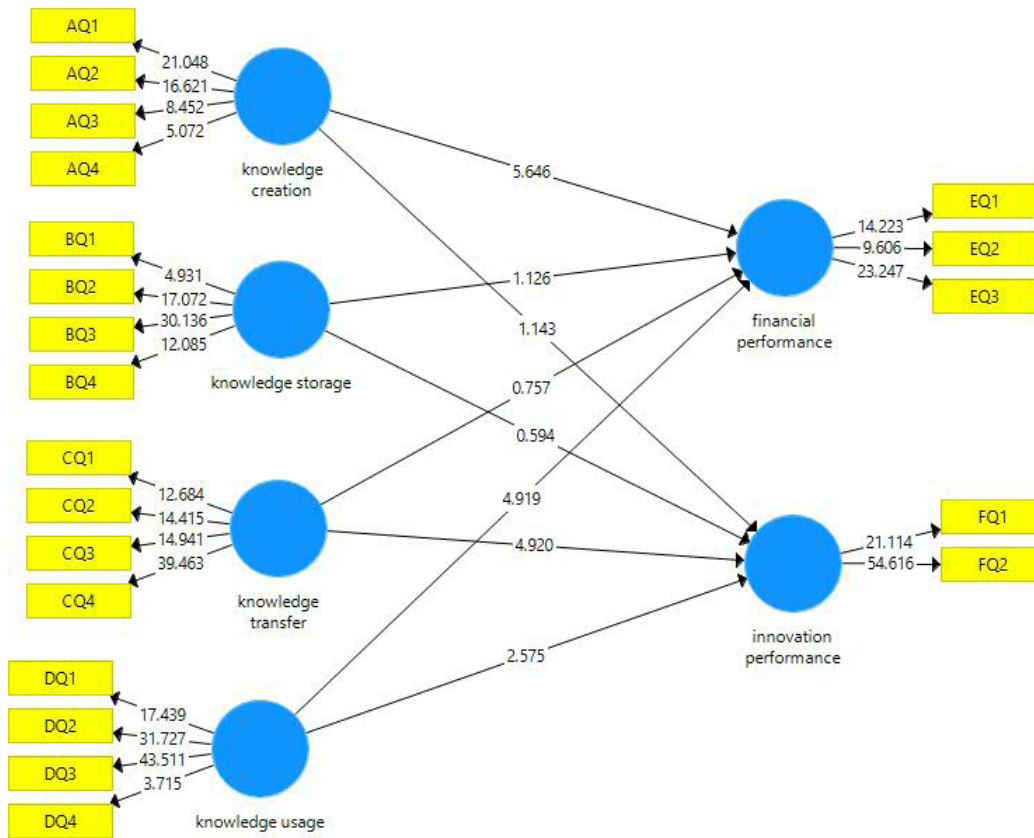


Figure 2: Research Model at Significance Mode

Table 2 indicates *t* values, path coefficient of B, and results related to acceptance or rejection of hypotheses.

Table 2
T values, Path coefficient of B, Determination coefficient, and results of hypothesis testing

Hypothesis	<i>t</i> value	Path coefficient of B	Result
Hypothesis 1: Knowledge creation has a positive and significant effect on financial performance of fledgling businesses.	5.64	0.439	Accepted
Hypothesis 2: Knowledge storage has a positive and significant effect on financial performance of fledgling businesses.	1.12	0.095	Rejected
Hypothesis 3: Knowledge transfer has a positive and significant effect on financial performance of fledgling businesses.	0.757	-0.094	Rejected
Hypothesis 4: Knowledge usage has a positive and significant effect on financial performance of fledgling businesses.	4.91	0.588	Accepted
Hypothesis 5: Knowledge creation has a positive and significant effect on innovation performance of fledgling businesses.	1.14	-0.113	Rejected
Hypothesis 6: Knowledge storage has a positive and significant effect on innovation performance of fledgling businesses.	0.594	0.079	Rejected

(Contd...)

<i>Hypothesis</i>	<i>t value</i>	<i>Path coefficient of B</i>	<i>Result</i>
Hypothesis 7: Knowledge transfer has a positive and significant effect on innovation performance of fledgling businesses.	4.92	0.608	Accepted
Hypothesis 8: Knowledge usage has a positive and significant effect on innovation performance of fledgling businesses.	2.57	0.315	Accepted

5. CONCLUSION

As it was mentioned at section of findings analysis and in accordance with Table 2 and structural model of research, hypothesis about the effect of knowledge creation on financial performance with path coefficient of 0.439 and *t* value of 5.64 was accepted. Hypothesis about the effect of knowledge storage on financial performance with path coefficient of 0.095 and *t* value of 1.12 was rejected. Hypothesis about the effect of knowledge transfer on financial performance with path coefficient of -0.094 and *t* value of 0.757 was rejected. Hypothesis about the effect of knowledge usage on financial performance with path coefficient of 0.588 and *t* value of 4.91 was accepted. Hypothesis about the effect of knowledge creation on innovation performance with path coefficient of -0.113 and *t* value of 1.14 was rejected. Hypothesis about the effect of knowledge storage on innovation performance with path coefficient of 0.079 and *t* value of 0.594 was accepted. Hypothesis about the effect of knowledge transfer on innovation performance with path coefficient of 0.608 and *t* value of 4.92 was accepted. Finally, hypothesis about the effect of knowledge usage on innovation performance with path coefficient of 0.315 and *t* value of 2.57 was accepted.

Applied Recommendations

- There should be an appropriate environment to implement new theories and ideas in fledgling business.
- Fledgling businesses should employ acquired knowledge of individuals to achieve organizational goals.
- Teamwork should promote and develop in fledgling businesses.
- Regular and continuous meetings should be set to exchange information between managers and employees in fledgling businesses.
- Intra-organizational networks of fledgling businesses should be applied to share information properly.
- Organizational structure of fledgling businesses should not lead to separation between staffs.
- There should be some mechanisms to use existing knowledge in fledgling businesses to increase financial and innovation performance in organization.
- New ideas and creativity should be considered as values in fledgling businesses.
- Employees of fledgling businesses should be encouraged to transfer their professional knowledge to newcomer staffs with low experiences. These encourages should have both financial and non-financial aspects to have an effective knowledge transfer process.

- Information should be organized regularly and transparently to support decision-making in fledgling businesses.
- There should be participation, involvement, and improvement in fledgling businesses.

Recommendations for Further Studies

This study has a unique and leading specification because of research title and territory so it can prepare the field for further studies in considered field. Hence, researcher aims at presenting some recommendations for further studies herein:

- It is recommended for further studies to examine effect of KM factors on other organizational variables in fledgling businesses such as efficiency, productivity, effectiveness, etc.
- It recommended using multi-criteria decision-making methods to evaluate KM factors in fledgling businesses.
- It is recommended to further studies to use dynamic system simulation to examine effect of KM factors on success of future success of fledgling businesses.

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