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Research Article

INVESTIGATING THE RELATION BETWEEN KNOWLEDGE MAP FIT AND KNOWLEDGE MANAGEMENT SYSTEMS SUCCESS IN IRANIAN FIRMS

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ABSTRACT
The shift from a product-based to a knowledge-based economy has resulted in an increasing demand for organizations to implement knowledge management systems (KMS) at an accelerating pace. Knowledge management systems refer to a class of information system (IS) applied to managing organization knowledge. Knowledge map is an effective knowledge management tool that enables visualizing knowledge and a relationship in a clear form via a way so that features of knowledge can be clearly highlighted. The present paper was to investigate the relation between knowledge map fit and KMS success. We first studied the success measures for knowledge management systems based on the previous studies and the effect of the knowledge map on this measure was summarized in a model. This model was evaluated and corrected on the expert opinion. We then evaluated the role of knowledge map fit on system quality, knowledge quality, service quality, user satisfaction, perceived KMS benefits, perceived ease of use and KMS use, in National Iranian Gas Company (NIGC) was evaluated. The statistical analysis using correlation coefficient and Friedman test indicated statistically significant relation between knowledge map fit with all above mentioned measures and the success of knowledge management systems as a whole.

***Keywords**: Knowledge Management Systems (KMS), Knowledge Map Fit, Success of Knowledge Management System.*

INTRODUCTION
Today, organizations have realized that knowledge is one of the most important and most prominent indicators of survival in the competitive world. So, employees are taken into consideration as the owners of capital and the most important capital of the organization more than anything. In fact,Peter Senge believes that the only competitive advantage source in the future is the knowledge that an organization has and ability of an organization will be faster in learning .Increasing the value of knowledge, it seems that managing and effective knowledge storage there will be the opportunity to create competitive advantage. Knowledge management has been taken into consideration as a tool that can collect and regulate the existing knowledge and then promote it entire the organization. Knowledge management is a never-ending task that will always help the organization in new Chongees, what can assure its success as a strategic tool is considering people as the knowledge owners. A fit knowledge map shows us that in an organization and its subsets and fields, who knows what and where it is. The importance of applying the knowledge may is deriving from where a knowledge map helps to simplify complex concepts, makes understand able through the graphic display, develop the knowledge and It to helps to identify the knowledge and its position .Based on the definition it seems that if the knowledge map is according to the needs of the organization and fits the definition seems tovfit with the needs of the knowledge map according to organizational goals, it can cause speed and proper use of experts 'knowledge and will also help the organization success, that's why we are dealing with the study.
Given that, the knowledge map is a visual representation of the obtained information and the relation between them, that shows effective communication and knowledge learning at multiple levels of detail, it seems that if the knowledge mapis according to the needs of the organization and fits the organizational

goals, it can cause speed and proper use of experts' knowledge and will considerably help the organization success. The goal of a knowledge management systems is to manage organizational knowledge .These systems have been developed to assist and support the implementation of the organizational processes ,knowledge creation, knowledge storage, retrieval, knowledge transfer and application. Using knowledge maps we can easily and quickly access the organizational knowledge.
This paper aims to investigate success of the knowledge criteria, and investigating that does the knowledge map fit have relation with the knowledge system success. The study has been conducted according to the following general questions:

1. What are the criteria of the success of knowledge management systems in the previous researches?
2. On which criterion of the success of knowledge management systems the knowledge management fit affects?
3. Does the knowledge management fit affect the success of knowledge management systems?

The eight hypotheses to answer the second question of research and based on the research conceptual model we will more dealt with, are expressed as following:

1. There is a significant relation between the knowledge map fit and service quality.
2. There is a significant relation between the knowledge map fit and knowledge quality.
3. There is a significant relation between the knowledge map fit and system quality.
4. There is a significant relation between the knowledge map fit and perceived ease of use.
5. There is a significant relation between the knowledge map fit and perceived interests.
6. There is a significant relation between the knowledge map fit and user satisfaction.
7. There is a significant relation between the knowledge map fit and applying KMS.
8. There is a significant relation between the knowledge map fit and KMS success.

MATERIALS AND METHODS

The present research is applied in terms of the purpose. Moreover, the study is to collected data to answering the research questions and investigating effect of the knowledge map fit on KMS success which is descriptive, and while there has taken a poll of the respondents in this study, therefore the study is considered as a kind of survey, and it is a field study due to being non-experimental and its implementation in real. Data collection tools of the study are questionnaire. The questionnaire consists of55closed questions that are designed in two parts(a) and(b), part (a) consists of7questions related to demographic characteristics of there spondents and part (b) includes 48closedquestionswhich measure 8structures of the research model .To measure each of the structures of the research model several questions have been suggested ,which are extracted from there levance standard questionnaire and the questions of service quality structure have been raised according to the proposed measures in the previous researches with experts' opinion for localization. In the paper,the statistical population was entire information technology department staff of National Iranian Gas Company.
The sampling is simple random that after distributing 100successful questionnaires we managed to collect80of the mand tried to perform the analysis. Using SPSS software and applying Pearson's correlation coefficient and Friedman test ,data analysis would be performed.The success of information systems is a multidimensional concept that can be evaluated at different levels. The main criterion of IS success is overall clarity and precise definition. So DeLone and McLeanin 1992 with a review of the IS success literature presented the model below.

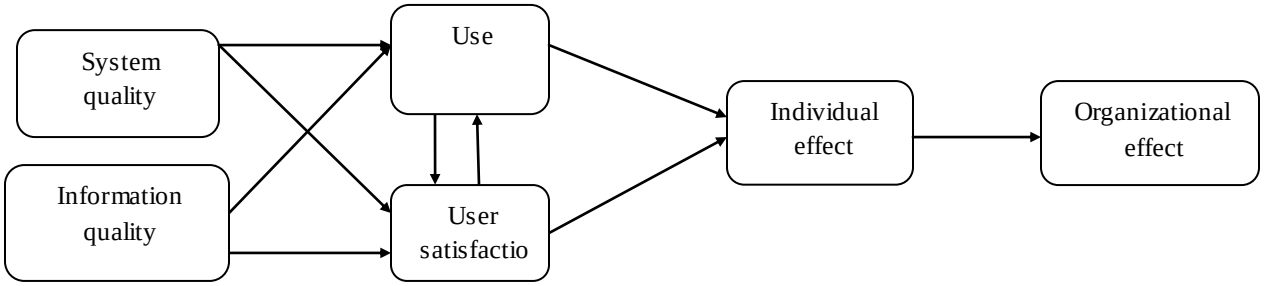

Figure1: DeLone and McLean model, 1992 (Wu, Wang, 2006)

This model has defined six modes dependent on IS success. The semodes include:
System quality, out put information quality, user satisfaction(user response), IS impact on user behavior(individual efficacy), IS impacton organizational performance(organizational effectiveness). This model offered a plan for the classification of IS success criteria. Further investigationin 2003, they presented their updated model as below.

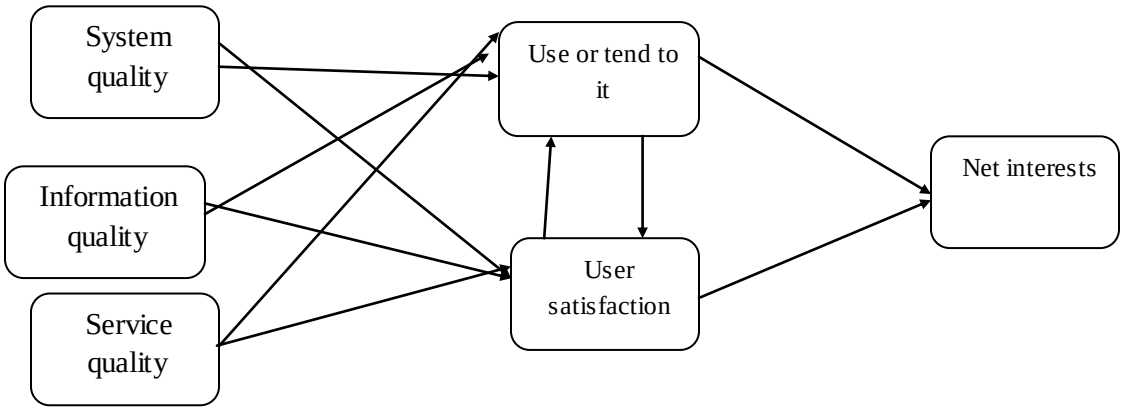

Figure 2: DeLone and McLean model, 2003

Wu and Wang in 2006 have Chongeed the modified model by DeLone and McLean in a research as following and applied it in measuring KMS success.

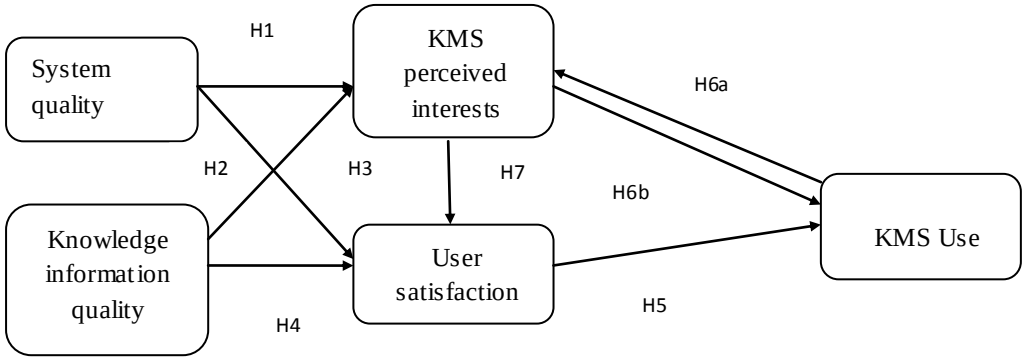

Figure 3: Wu and Wang model, 2006

Managerial success factors (MSF) include subsets of knowledge management strategy, top management, organizational culture, motivational support, organizational infrastructure and evaluation and technical success factors (TSF) include integrated technical infrastructure and knowledge transfer channels, respectively.

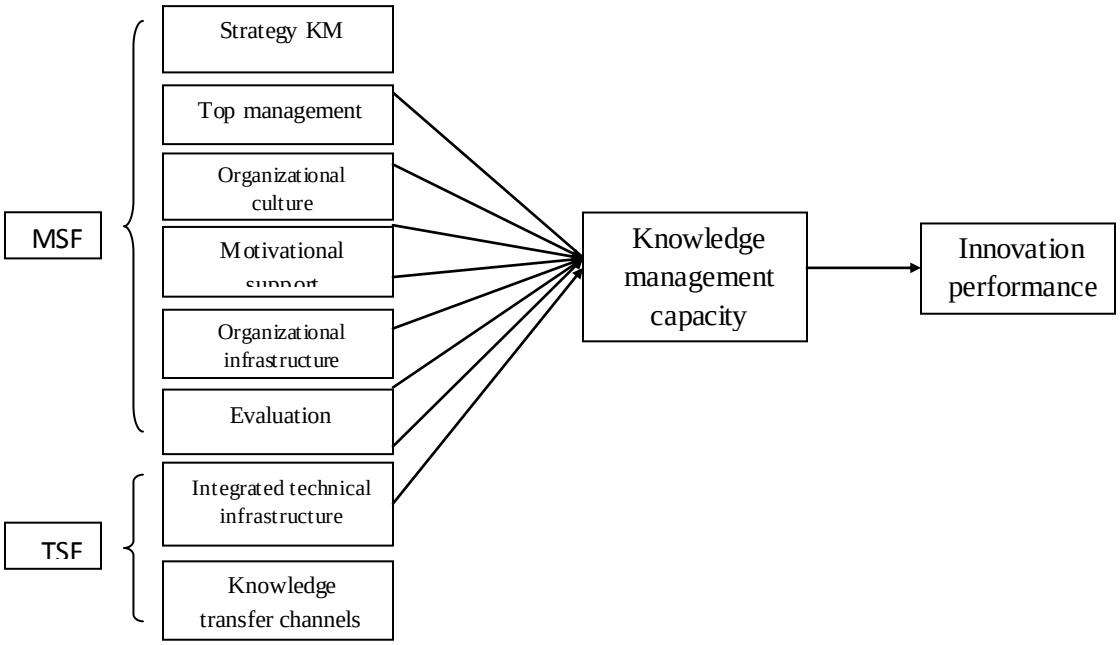

Figure 4: Conceptual model of Mercado research, 2010

Table 1: A summary of the previous researches

Research title	authors	Variables
How the knowledge map fit and personalization influence KMS success in firms with high technologies	Lai et al, 2009	Ease of use, user satisfaction, beneficiary, knowledge map, personalization
Social capital, ability of information technology and KMS success	Irene Chen, 2008	System quality, knowledge quality, service quality, user satisfaction, perceived interests, net interests, social capital (trust, common insight, mutual relations, IT capabilities)
KMPI: measuring knowledge management performance	Lee et al, 2008	Performance index criteria, maintenance price, PER, research and development cost
Evaluation index of knowledge management performance	Tseng. 2008	Performance index, financial criteria, non-financial criteria
Discussion of using system in knowledge management systems	Jennex, 2005	Social factors (culture), complexity, jobs fit in short-term, jobs fit in long-term, the fear to lose job, KMS use
Measuring user satisfaction with KMS: Scale development, refinement, initial test	Ong and Lai, 2007	KMS user satisfaction, content, ease of use, personalization, communications
Factors influencing the use of permanent(loyal) knowledge management systems	Clay et a, 2005	System quality, knowledge quality, perceived beneficiary, perceived ease of use, motivation, authority, continuous use (loyal)
Perceiving KMS application records: integration of social cognitive theory and task technology fit	Lin and Hyuyoung, 2008	Task dependency, implicit task KMS characteristics, KMS self-beneficiary, perceived task technology fit, expectations personal results, expectations of results related to the performance, applying KMS
The impact of critical success factors of knowledge management on innovation performance of organizationsat Columbia	Mercado, 2010	Management success factors: Managerial Success Factors (MSF) knowledge management strategy, top management, organizational culture, motivational support, organizational infrastructure and evaluation Technical success factors (TSF): an integrated technical infrastructure and knowledge transfer channels knowledge management capacity, innovation performance
Organizational demographic variables and knowledge management implementation success	Chonge et al, 2010	The primary factors of knowledge management success, knowledge management strategy, knowledge management process, organizational performance, demographic variables

The research model:

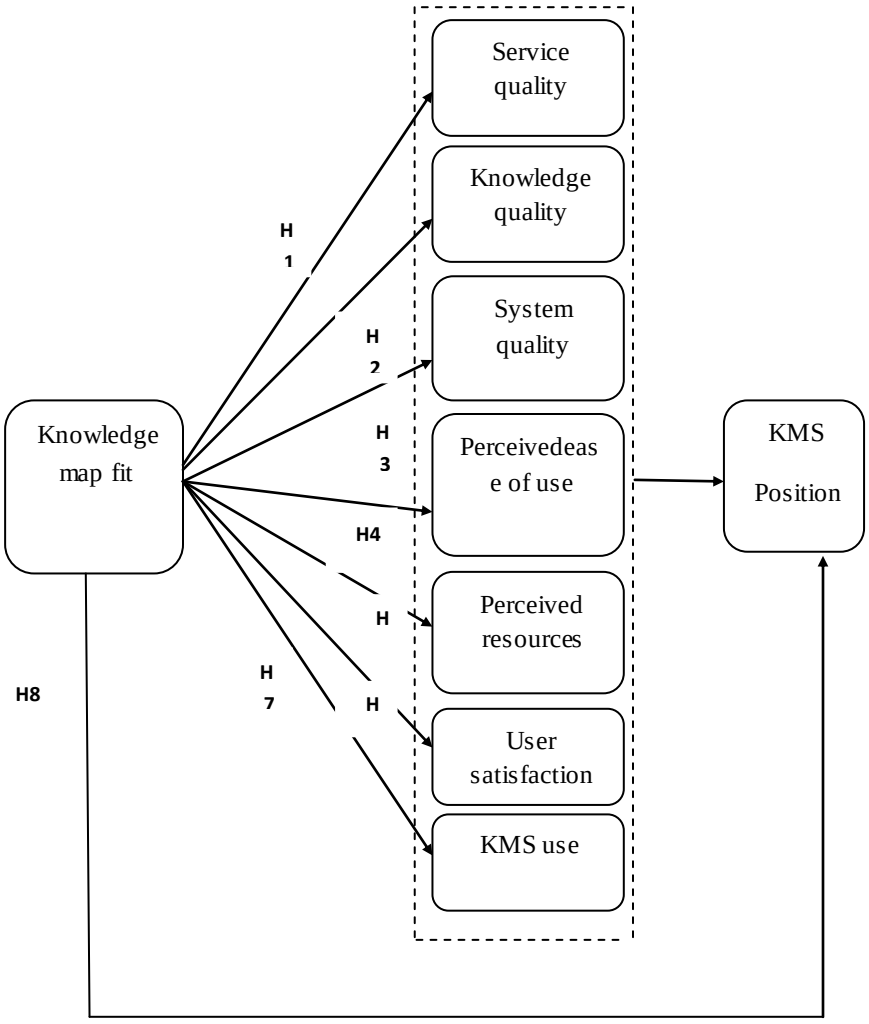

Figure 5: conceptual model of the research

RESULTS

The only competitive advantage source in the future is the knowledge that an organization has and the organization's ability will be faster in learning. So the staff has been taken into consideration more than anything as the owners of the knowledge and the most important capital. A knowledge management system is a class of information systems that manages organizational knowledge. This system has been developed to support and assist the implementation of organizational processes, knowledge creation, knowledge storage, retrieval, knowledge transfer and application .According to the results obtained of the research hypotheses, research users can attempt to improve their organization by discovering the relation between knowledge map fit and success of knowledge management systems. They can obtain the criteria of success of knowledge management systems using an appropriate knowledge map fit and achieve a competitive advantage with a successful knowledge management system. Managers can use the knowledge map to remove the gap between business and employees in facilitating user satisfaction. Users can save a lot of time using the knowledge map fit and easier reach the required knowledge. In addition, response time would be decreased by a proper knowledge map and problem-solving and decision-making process can be improved.

DISCUSSION

What are the criteria of success of knowledge management systems in the previous researches? The criteria of success of knowledge management systems consist of the following seven criteria: the criteria are respectively presented below based on their priority in this paper obtained using the Friedman test:

1. Perceived interests (Lay et al, 2009, Irene, 2008, Wu and Wang, 2006, Clay et al, 2005, Jennex and Elfan, 2004 and Maier, 2002)
2. Knowledge quality (Irene, 2008 and Wu and Wang, 2006 and Clay et al, 2005 and Jennex and Olfman, 2004 and Maier 2002)
3. Applying knowledge management systems(Wu and Wang, 2006, Jennex, 2005)
4. Perceived ease of use (Lai et al, 2009, Ong and Lai 2007 and Clay et al, 2005)
5. System quality (Irene, 2008 and Wu and Wang, 2006 and Clay et al, 2005 and Jennex and Olfman, 2004 and Maier, 2002)
6. Service quality (Irene, 2008 and Jennex and Olfman, 2004 and Maier, 2002)
7. User satisfaction (Lai et al, 2009, Irene, 2008, Ong and Lai, 2007, Wu and Wang, 2006, Jennex and Olfman, 2004 and Maier, 2002)
8. In response to the question, the relation between knowledge map fit with each of the seven criteria of for success of knowledge management systems were separately investigated by the Pearson correlation test. The results showed that the knowledge map fit has significantly correlated with all criteria of the success of knowledge management systems. In other words ,system quality ,service quality, system quality ,user satisfaction, perceived interests, perceivedease of use and the use of knowledge management systems all depend on knowledge map fit.

Does the knowledge map fit affect the success of knowledge management systems? To answer the question first the knowledge management systems variable, sum of success of knowledge management systems criteria were considered.KMS Success=quality of service +quality of system +quality of knowledge +user satisfaction + applying the knowledge management systems+ perceived ease of use + perceived interests and then correlation between the knowledge map fit and success of knowledge management systems were studied and the correlation coefficient(0.643) between these two variables showed that the knowledge map affect the success of knowledge management systems.

CONCLUSION

According to the analysis carried, the status to approve or not approve the research hypotheses are summarized below:

1. There is a significant relation between the knowledge map fit and service quality. (Confirmed)
2. There is a significant relation between the knowledge map fit and service quality. (Confirmed)
3. There is a significant relation between the knowledge map fit and the perceived ease of use. (Confirmed)
4. There is a significant relation between the knowledge map fit and the perceived interests. (Confirmed)
5. There is a significant relation between the knowledge map fit and user satisfaction. (Confirmed)
6. The suitability map, there are significant relationships between knowledge and benefits. (Confirmed)
7. There is a significant relation between the knowledge map fit and applying the knowledge management system. (Confirmed)
8. There is a significant relation between the knowledge map fit and applying the success of knowledge management systems. (Confirmed)

As it was expressed the knowledge map fit influence each of the success of knowledge management systems criteria, however based on the correlation coefficients obtained in this study, in the studied organization the knowledge map fit with the correlation coefficient(0.644) has the greatest impacton the

quality of knowledge. An interesting result of the study is that the knowledge map fit has the least correlation coefficient(0.332) with the perceived interests, although as it was already observed in the previous section, the perceived interests has been known as the first priorities of the knowledge success criteria in the study and the result shows that knowledge map fit has had smaller perceived interests for the users. This result can also be detected through a higher priority of clearly and capability to perceive the knowledge map fit than compliance with the individual recognition of his tasks. The knowledge map fit correlation equals to the ease of use(0.615) that approves the result and indicates that the knowledge map fit ha a great effect on users' perceived ease .In this paper ,according to the results of the answer to second question, that the knowledge map fit had a significant correlation with all criteria of the knowledge success, it was predicted that the knowledge map fit affects the success of knowledge management systems, and the results of statistical analysis confirmed the issue in the studied organization. As regards in the field of knowledge map fit, clarity and comprehensibility of the knowledge map has the higher priority than compliance with the individual's recognition of his tasks in this study, it can bestated that the clarity and comprehensibility of the knowledge maphas had a greater effect on the knowledge management success in the studied organization.

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