

Investigating the Relationship between Knowledge Creation Process and Organizational Performance in a Service-Sector Organization

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Abstract

Today knowledge creation, an important part of knowledge management is an essential issue for success of every firm. But there are few researches which have investigated the role of this process on the performance of organizations. Thus to fill this gap this paper has tried to investigate the significance of knowledge creation process in improving the market, customer and financial performances of service sector organizations. To attain this goal this paper conducted the banking industry in Isfahan as one of the most important organizations in service-sector to investigate the nature of relationship between knowledge creation and organizational performance. In order to examine the main hypothesis Structural Equation Modeling (SEM) and Amos graphic have been used. The results imply that knowledge creation process can positively affect the performance of a service-sector organization.

Keywords: Knowledge Creation Process, SECI Model, Organizational Performance, Structural Equation Modeling (SEM).

Introduction

Interest in the efficient use of "knowledge management" (KM) as a tool to attain competitive advantage and satisfy customers' needs has grown in recent years (Toften & Olsen., 2003: Raorane et al., 2012)

Today knowledge has been attracted so much attention as an available competitive resource, since it leads to innovation and generates an important competitive advantage for each organization (Joia et al., 2009). Thus it is suggested that organizations had better keep up with competitors and use knowledge to beat them (Ray, 2009).

The concept of knowledge management has two core processes: knowledge creation and knowledge transfer (Kumar & Ganesh, 2009). Knowledge creation is defined as accumulating new knowledge and/or correcting the existing knowledge (Wu & Lin, 2009). Actually by using knowledge creation process individuals create new ideas by combining current knowledge (Li et al., 2009).

Guthrie (2001) believed that nowadays effective organization know that for gaining advantage they must pay attention not only to tangible assets, but also to intangible information and knowledge creation as the key factors for their success (Shih et al., 2010). Hence facing with this global competition, creating and managing knowledge is now crucial for the survival and development of an organization (Wu & Lin, 2009).

Thus because of the positive influence of intangible assets on the success of an organization, and more important, because recently service organizations play a vital role in facilitating the life of customers we aim to investigate the impact of knowledge creation process on performance of service organizations. In order to achieve this goal we use the SECI model of knowledge creation proposed by Nonaka and Konno to find out whether generating new knowledge and ideas within a firm can improve organizational performance or not.

For testing the proposed hypotheses and because of the increasing importance of service and its quality in the customers' life we will choose the banking industry in Isfahan because banking is a knowledge-based industry, since it contains the activities of service (knowledge) exchange rather than product exchange (Shih et al., 2010).

In developing this paper we will start with a brief review of knowledge and knowledge management, knowledge creation process and the SECI model of this process and organizational performance with its dimensions. Then we will elucidate the role of knowledge creation process in performance. After that we will present our theoretical point of view and propositions and finally we will end up with contributions and conclusions of this research.

Literature Review

Knowledge Creation Process and the SECI Model

Creation of new knowledge is the first step of knowledge management Shih et al (2010) actually by using knowledge creation process individuals create new ideas by combining current knowledge (Li, 2009). Based on the theory of knowledge creation, knowledge is created by SECI model which contains four processes of socialization, externalization, combination, and internalization. This process of knowledge creation describes dynamic contact between two types of knowledge titled tacit and explicit. This model creates value for every organization, by generating new ideas (Li et al., 2009).

Socialization process changes tacit knowledge held by individuals into new tacit knowledge through shared experiences (Li et al., 2009; Nonaka & Takeuchi, 1995).

By Externalization process tacit knowledge can be changed into explicit and clear forms that are more understandable (Li et al., 2009; Nonaka, 1994; Nonaka & Takeuchi, 1995). Through combination process explicit knowledge collected from inside or outside the organization is changed into more systematic explicit knowledge. Internalization process transfers explicit knowledge into tacit knowledge. In internalization, individuals can obtain and captivate

knowledge through demonstration or other tools like learning by doing and on-the-job training (Li et al., 2009; Nonaka & Takeuchi, 1994).

It has been shown that the knowledge transformation of SECI has some advantages. It provides value to the customers, and helps to gain a competitive position in the market (Li, 2009; Griffith et al., 2006)

We aim to use the SECI model to examine the knowledge creation process.

Organizational Performance

Today the concept of performance is an attractive and important issue for every business (MousaviTatfi, 2012; Antony et al., 2010). According to definition organizational performance is a degree that shows how fine firms can manage their operations and present value to stakeholders (Antony et al., 2010).

Nowadays researchers have faced with limitation of firm performance measures (MousaviTatfi, 2012). In our study we use the scale proposed by Akroush and Al-mohammad in 2010. According to them organizational performance has three dimensions: market, customer, and financial performances (Akroush & Al-Mohammad, 2010).

First dimension is the market performance. According to Akroush and Al-mohammad (2010) firm's financial properties (e.g. stock price), company's non-financial resources (e.g. customer service), company's skill to progress new company services and company's status in the marketplace, are the pointers of this dimension.

Second is customer performance. Improving customer satisfaction, customer loyalty and attracting new customers are the indicators of this dimension (Akroush & Al-Mohammad, 2010). Financial performance is the last dimension which is a major indicator of "well" business procedures. Return on investment, company's profitability and market share (all compared with competitors) are the indicators of this dimension (Akroush & Al-Mohammad, 2010).

In developing our research we use market, customer and financial performances as the dimensions of organizational performance.

Knowledge Creation Process and Organizational Performance

Today many organizations have figure out that attaining better performance is not only depended on the successful arrangement of tangible properties but also on the effective management of information (Mills, 2011).

Previous papers have discovered the vital role of knowledge creation in the successful organizations (Li et al., 2009; Nonaka & Takeuchi, 1994). Organizations that better apply the process of knowledge creation can connect knowledge in new ways, and present more value to customers by improving market offerings (Li et al., 2009). According to Yong, et al (2009) when firms are better at knowledge creation through SECI process; they are more successful in reaching competence, development, and return. Thus generating new knowledge is vital since it has positive effect on performance (Li et al., 2009).

According to above and considering the importance of intangible assets in the success of every firm especially service organizations, in this study we aim to clarify the role of knowledge creation process as one of the most important parts of the knowledge management-in improving market, customer and financial performance of an organization in a service sector.

Methodology

Today and faced with an uncertain environment makes it vital for organizations attain distinctive competitive advantage. Now firms are finding out that only focusing on tangible assets is not the key. Actually in order to keep up with competitors every organization must admit the importance of intangible properties and pay enough attention to them.

According to resource-advantage theory Knowledge is one of the strategic resources of every organization (Li et al., 2009). which is an important key in the successful performance of every firm. Considering the variable nature of customers' needs and the uncertainty of the environment it is substantial for each organization generates new knowledge and tries to beat competitors with this resource.

Few researches have mentioned the positive relationship of knowledge creation with performance .Therefore in this paper in order to fill this gap and because of the importance of intangible assets in service sector, we aim to investigate the role of knowledge creation process on the overall performance of service sector organizations and most important dimensions of this concept titled market, customer and financial performances.

In the following we will develop our hypotheses and present the conceptual model of our research.

Tables and Figures

Table-1

Goodness Indicators of The Structural Model

| Indicators | CFI | GFI | RMSEA | RMR | TLI | P |
|------------|-------|-------|-------|-------|-------|-------|
| Values | 0.965 | 0.961 | 0.024 | 0.032 | 0.954 | 0.008 |

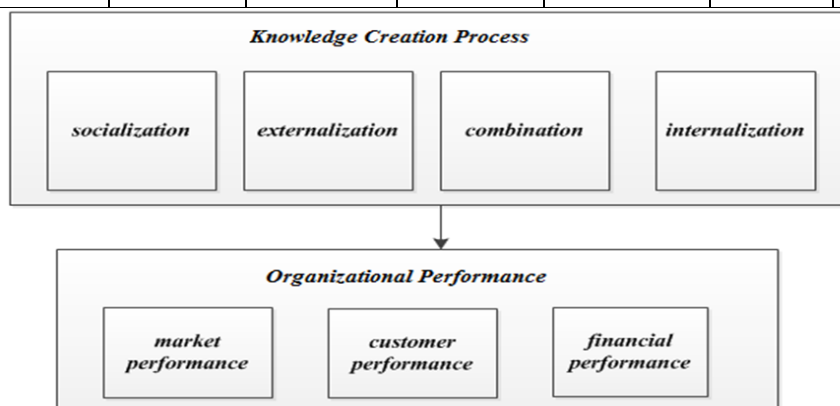


Figure-1 the Conceptual Model

H1: There is a positive relationship between knowledge creation process and overall performance of a service-sector organization.

H2: There is a positive relationship between knowledge creation process and market performance of a service-sector organization.

H3: There is a positive relationship between knowledge creation process and customer performance of a service-sector organization.

H4: There is a positive relationship between knowledge creation process and financial performance of a service-sector organization.

Figure-1 shows the conceptual model.

Sampling

In developing this paper we conducted all branches of private-owned banks in Isfahan because banking is a knowledge-based industry, as it contains the activities of service (knowledge) exchange rather than product exchange⁸.

The total numbers of employees were 780 and the sample size regarding to the Morgan's table was 260. From 300 distributed questionnaires, Finally 268 questionnaires (a response rate of 89.33 percent) were returned within the stipulated time. After deleting the questionnaires that were incomplete, a sample of usable 250 responses, representing a response rate of 83.33 percent, was considered for the final analysis. Of these, 186 were males and 64 were females, over 72 percent were in the range of 20 to 35 years. Their mean tenure in the organization was 5 years. Respondents were asked not to sign or give any form of identification to ensure the anonymity of their responses.

Measurement

To measure the hypotheses, we conducted the multi-dimensional survey with five parts. The first part included information about participants' demographic variables such as age, gender, and tenure. The second part was related to knowledge creation.

In this paper to measure knowledge creation process variable we use the four dimensions of socialization, externalization, combination, and internalization⁷. We used nonaka's questionnaire.

In the third part, in order to measure organizational performance variable we use market, customer and financial performances.

Financial properties (e.g. stock price), company's non-financial resources (e.g. customer service), company's capability to present new company services and company's reputation in the marketplace, are the pointers of market performance. Improving customer satisfaction, customer loyalty and attracting new customers are the indicators of customer performance and Return on investment, company's profitability and market share (all compared with competitors) are the indicators of financial performance dimension¹⁵.

We rate the measurements on a five-point Likert scale. Confirmatory factor analysis (CFA) test was used to examine the factor validity. The results of the CFA test in this study supported the validity of the measurement model. We also used Cronbach's alpha to determine the internal consistency of items in a survey instrument. The alpha reliabilities of all variables applied in this study were acceptable (more than 0.7) and the total alpha was 0.81.

Results and Discussion

Test of Structural Model

By using AMOS 18.0 we tested the model fit of our paper model. Researchers usually use different indices to determine model fit. As proposed by Brown (2006), fit indices are categorized into absolute fit, parsimony fit, and comparative fit. First group measures how well the proposed model reproduces the observed data. The model chi-square (χ^2) and the standardized root mean square residual (SRMR) are usually the best elements in this group. Parsimonious indices are similar to the first factors except that they consider the model's complexity, too. An example is the root mean square error of approximation (RMSEA). Finally, the comparative fit indices are used to assess a model fit relative to an alternative baseline model. The comparative fit index (CFI) and Tucker-Lewis index (TLI) is classified in this group¹⁷. In this study, all the fit indices mentioned above would be used.

The results of testing fitness of structural model fit indicated that, $C_{min}/df=2.178$, $CFI=0.965$, $RMSEA=.024$, $RMR=.032$, $GFI=.961$, $TLI=.954$, and $P(\text{value})=0.008$. All of the goodness of fit indexes were within acceptable range and indicate that the model of the research has a good fitness. In order to test the hypotheses and casual path, the maximum likelihood method have been used. Table-1

Hypothesis Testing

A positive important bond was found between knowledge creation and organizational performance ($\beta=0.828$, $C.R = 6.468$). The main aim of this study was to investigate this relationship. As the results show the quantity and quality of knowledge creation can strongly improve organizational performance.

There are previous researches in which the relationship between knowledge creation and organizational performance has been investigated. For example Seleim and Khalil (2007) conducted a research in order to find out the nature of relationship between knowledge creation and organizational performance and finally the results showed that when acquired knowledge is used appropriately, a significant and positive link is observed between knowledge acquisition and organizational performance¹⁸.

In another study Bansal (2007) proposed that there are three mechanisms in the KM systems that affect firm performance: the firm's capability to create new knowledge, its ability to build on that knowledge, and its effectiveness in capturing a high proportion of subsequent spin-offs¹⁸.

In this paper and because of the importance of managing intangible assets in organizations which present different kinds of services, for the first time we investigated the influence of creating new knowledge through SECI model on the customer, market and financial performance of banking industry in Isfahan.

As we supposed in hypothesis 2, there is a positive link between knowledge creation process and market performance of a service-sector organization ($\beta=0.815$, $C.R = 5.973$). It means that the more knowledge is created by a service organization, the higher rate of market performance will be revealed.

Hypothesis 3 mentioned that knowledge creation positively influences customer performance ($\beta=0.762$, $C.R = 4.323$). In the other word because of the changeable nature of customers' needs, managers can satisfy more necessities by generating new knowledge.

A positive bond was found between knowledge creation and financial performance ($\beta=0.728$, $C.R = 4.068$). Therefore hypothesis 4 was supported. It means that to improve financial performance the managers can try to increasing rate of knowledge creation. Therefore by creating new ideas managers can offer new services to their customers sooner than their competitors and in this way they can improve financial performance of organization.

Conclusion

The main goal of this research was examining the relationship between knowledge creation and organizational performance in banking industry as one of the industries which present important services to the customers. To gain this goal we applied private sectors banks of Isfahan and 260 of their employees.

We considered four features of "socialization, externalization, combination, and internalization" for assessing knowledge creation. The organizational performance was measured via its three dimensions of "market, customer and finance". The results proved all four hypotheses and the appropriateness of structural model by AMOS through SEM method.

Today and facing with such an unstable environment makes it vital for organizations pay attention to the changes and being able to respond to them effectively. So as some of the implications of our research it can be mentioned that because of the importance of intangible assets in the success of every firm especially in banking industry, it is crucial for managers pay enough attention to the field of knowledge management and importantly creating new ideas as one of the most important processes of that. Thus we suggest that in order to satisfy customers' needs and attain competitive advantage, bank managers had better create a good atmosphere in their organizations and encourage their employees to express new ideas. They also had better apply effective ways to manage knowledge workers better¹⁹. In this way managers can generate new knowledge and offer better services to their customers and consequently improve the overall performance of the firm.

In spite of advantages and implications, our research has limitations as well. Because of the limitation of time and energy we apply this paper in private-owned banks in Isfahan. Other researchers can conduct their papers in both public and private-owned banks to compare if the nature of the relationship between knowledge creation process and organizational performance is different in these two types of service- sector organization. Also other authors can examine the impact of knowledge creation process on organizational performance in other industries such as insurance or telecommunication. Finally and because of the importance of knowledge transfer process in the success of organizations researchers can organize their papers to examine the impact of knowledge transfer process on organizational performance.

Lastly we hope that the results of our research can help service organizations generate new ideas and consequently please the necessities of their customers.

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