A Structural Relationship Between Knowledge Management, Innovation, And Performance Of Iranian Industries: A Theoretical Approach

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ABSTRACT:

This paper presents a model to conduct an empirical study in Iranian large Industries in order to improve their performance. The Innovation plays a fundamental role in determining the performance in Iranian manufacturing industries. In this research, a model has been developed that includes the factors of Knowledge Management and Innovation to study their effect on the performance of Iranian Industries. It is hoped that this paper can provide an academic source for both academicians and managers due to investigate the relationship between Knowledge Management, Innovation, and Performance in a systematic manner to increase successful rate of Knowledge Management implementation.

Keywords: *Knowledge management, Innovation, Firm performance, Iranian industries*

1. Introduction

Jones, (2003) pointed out that Knowledge Management (KM) is an integrated, systematic approach to identify, manage, and share all of the department's information assets, comprising documents, policies and procedures, databases, and also previously unarticulated expertise and experience resident in individual officers. KM is also known as a systematic, goal-oriented application of measures to steer and check the tangible and intangible knowledge assets of companies, with the aim of using existing knowledge inside and outside of these firms to enable the creation of new knowledge, and generate value, innovation and improvement of performance. (As cited by Akhavan et al, 2006)

Knowledge management has recently revealed as a new discipline in its own right and, given its newness, is probably still developing its theoretical home. In this article, an enhanced understanding of KM will be provided by revisiting the works of Penrose (1959) and Nelson et al, (1982). This paper will discuss that although knowledge in itself is a resource, the effective management of knowledge enables those within the firm to extract more from all resources available to it. In addition, knowledge management plays an important supporting function by providing a coordinating mechanism to enhance the conversion of resources into capabilities.(As mentioned by Darroch, 2005)

One of the fundamental building blocks of KM is performance. Performance is recognized as an important factor by some researchers many years ago (Phusavat et al, 2009). This factor includes financial and non-financial indicators (Wilson et al, 2003). According to Phusavat et al. (2009), performance measurement can be considered as a significant factor in the failure and success of each quality effort of the organization. All in all, based on the above, this study attempts to enhance the performance through KM perspective.

As explained above, Knowledge Management (KM) was identified as a factor that improves performance by organizations many years ago. Knowledge Management is a comprehensive approach for improving Innovation, and Performance. Unfortunately, this factor is unknown to Iranian Industrial SMEs. The previous study investigated the Knowledge management through a multi case study research in Iran but they didn't probe this factor in the Iranian Industrial SMEs. We also have problems for implementing KM in the Iranian industry. Knowledge Management (KM) is important in Iranian industrial SMEs because if we consider this factor in this industry the company will improve its performance. This research has selected Innovation as an important factor to help Knowledge Management. Furthermore, this factor can help KM in implementing its goals and assist KM in discovering its problems. Innovation is a significant factor in implementing KM in the Iranian industrial SMEs. The concepts of KM are relatively new to the Iranian Industries. (Akhavan et al, 2006)

2. Literature Review

2.1. Previous Research Supporting Knowledge Management

Smith (2004) pointed out that KM creates a new working environment where knowledge and experience can easily be shared as well as enables information and knowledge to reveal and flow to the right people at the right time so they can act more efficiently and effectively.

For a deeper understanding of the knowledge management processes, a try to express the hidden meaning of data, information and knowledge is necessary. Data means a set of discrete and objective facts concerning events. Therefore, they can be construed as a structured record of transactions within an organization. Information is data with attributes of relevance and purpose, usually having the format of a document or visual or audible message. Knowledge is linked to the capacity for action. It is linked to the users' values and experience, being strongly connected to pattern recognition, analogies and implicit rules. At the same time, by the comparison of different definitions of knowledge management the following aspects of high relevance are resulted during KM adoption. Exploitation of existing knowledge is creation of new knowledge, process orientation, goal orientation, value orientation, improvement orientation, and innovation orientation. According to Smith, (2004) KM presented in three KM case studies from strategic point of view. This paper focused on different knowledge management strategies and their impact on innovation through case analysis (Akhavan et al, 2006).

Penrose (1959) mentioned that in general equilibrium theory resources were considered to be homogeneous, information perfectly available and evenly distributed, profit maximization central and equilibrium level of output guided production decisions. There are two resources: 1-Tangible assets: financial types of capital equipment, land and buildings location and the qualification profile of employees. 2-Intangible assets: Either people dependent (human capital) or people independent or include organizational capital (culture, norms, routines and databases), technical capital (patents) and relational capital. Penrose viewing knowledge management is to consider it as a coordinating mechanism that enables resources to be converted into capabilities (Darroch, 2005).

Chong et al, (2005) pointed out that the globalization of business, shift from production-based to knowledge-based economy growth of ICT, the strive to become learning organizations and the emergence of knowledge workers have made KM practice a must to they across all types of levels of firms. In the same way, Drucker(1995) rightfully predicts

that knowledge has become the key economic resource and a dominant source of competitive advantage.
Salleh, et al (2002), in their paper on managing human resources toward achieving KM in Malaysia, define KM as a process of leveraging knowledge as means of achieving innovation in process and products/services, effective decision-making, and organizational adaption to the market for creating business value and generating a competitive advantage to organizations. They claimed that the analysis of critical success factors provide an important meaning to KM through the identification of core processes that are critical to successful KM implementation. Salleh et al, (2002) suggested that a KM programmed needs to identify critical performance indicators of success factors to gauge its performance. Chong, et al (2005) assumed that there are 11 key KM components to successful KM implementation. They consist of: 1-employee training 2-employee involvement 3-teamworking 4-employee empowerment 5-top management leadership and commitment 6-information systems infrastructure 7-performance measurement 8-knowledge-friendly culture 9-benchmarking 10-knowledge structure and 11-innovation (Chong, 2006).

This article describes in two ways. Firstly, a richer understanding of Penrose's (1959) contribution can be described by integration knowledge management into the resource-based view of the company. Also, Nelson et al, (1982) view, that coordinating mechanisms are required for resources to be transformed into capabilities, can be established. Secondly, viewing knowledge management is a supporting rule may confine any acceptance of its significance. Therefore, empirical evidence as to the consequences of effective knowledge management comprises: competitive advantage (Hall, 1993) developed financial performance (Wiig, 1997): Innovation (Antonelli, 1999: Carneiro, 2000: Dove, 1999); expectation of problems (Carneiro, 2000); increased organizational learning (Buckley et al, 2000). This article will empirically check the relationship between knowledge management, innovation, and firm performance.

2.2. The Relationship Between KM Strategies And Firm Performance

There is limited research on testing the relationship between KM strategies and financial performance, even less on research specifically involving sales growth. However, drawing from organizational learning theory, the assumption has often been made that effective acquisition and utilization of new knowledge is a source of flexibility, adaptability and competitive advantage (Spice, et al 2006), and hence associated with better organizational performance. Though labeling their variable organization learning, Spicer, et al (2006) examine the influence of a learning orientation and sales growth, finding support for the relationship between the two variables, especially the degree to which information is shared with employees as well as worker involvement in renewal activities (which is similar, to some extent to the organizational learning concept).

2.3. The Relationship Between Innovation And Firm Performance

A further relationship examined in this study is the link between innovation and performance. A positive relationship between innovation and performance is fairly well established in the extant literature (Mavondo, 1999; Vazquez et al, 2001; Han et al, 1998). Drucker, (1995) pointed out that KM is different from general management activities since it focuses on the perspective of knowledge, and ultimately purposed at applying this knowledge in a systematic and organized manner to further create knowledge. Furthermore,

this study also identified that knowledge management improves innovation and performance in organizations (as demonstrated by Ho et al, 2009)

2.4. Innovation As A Mediating Variable For Knowledge Management And Performance

Uhlaner et al, (2007) studied the relationship between KM, innovation, and performance measurement and identified many factors of knowledge management on performance. His findings were also relevant to KM theory because it shows knowledge management to be effective in performance of Dutch SMEs. He also mentioned in a later research that innovation can be used as a mediating factor for KM and its impact on performance in large manufacturing. Knowledge management is concerned with innovation and sharing behaviors', managing complexity and ambiguity through knowledge networks and connections, exploring smart processes, and deploying technologies (Standards Australia, 2005).

3. Research Questions

The main research questions of this study are as below:

- What are the effect of Knowledge Management on Innovation and performance in Iran's major industries?
- What is the relation between Knowledge Management and Innovation in Iran's major industries?
- What is the relation between Innovation and performance in Iran's major industries?
- What is the direct and indirect effect of KM on performance in Iran's major industries

4. Research Objectives

The general objective of this research is to describe the influence of Knowledge Management on Innovation and performance in Iran's major industries. The specific objectives of this research study are as below:

- To evaluate the effect of Knowledge Management on Innovation and performance ;
- To discover the relationship between Knowledge Management on Innovation ;
- To find out the relationship between Innovation and performance and;
- To identify the direct and indirect effects of KM on performance in Iran's major industries.

5. Research Methodology

This research tries to employ quantitative survey in order to fulfill research hypotheses for Iranian Industries. However, in this paper we only focused on theoretical aspect of the research topic. This article uses the model SEM (structural equation modeling). This model uses for effective Knowledge management in innovation and performance. Sampling frame of this study, middle managers were chosen to participate in this study due to the important role played by them in successful KM implementation. Questionnaire contains two sections: The first section has the company's demographic information, which consists of types of ownership, number of employees, years of operation, whether the organizations have made significant investment in KM and stage of KM development. The second section measured the perception of the middle managers concerning the importance and level of implementation of the KM. In order to examine research hypotheses Structural Equation Modeling is used through SPSS AMOS.

5.1. Theoretical Model

This model was shaped from three comprehensive variables including Knowledge Management, Innovation, and performance. The KM is represented by many observed variables including tangible knowledge and intangible knowledge. Performance is shown as a dependent variable. However, Innovation is not determined by any variable and this factor is represented as a single variable and will be measured using a set of question. These variables extracted from review of academic literatures. Furthermore, the linkages between variables are developed based on the theoretical framework.

It can be seen that all variables of this theoretical model is strongly supported by different research studies. The theoretical model of this study is unique when Innovation is added as a fundamental factor. As Darroch et al. (2005) stated the Innovation is a fundamental element in such research model. According to review of earlier studies, there was no sufficient study to investigate the role of Innovation as a vital variable between Knowledge Management and Companies' performance in Iran's major industries. Hence, the current study attempts to use Innovation as an intervening variable in order to investigate its pivotal role between KM and Performance. The Figure 1 portrayed the theoretical model of the current study.

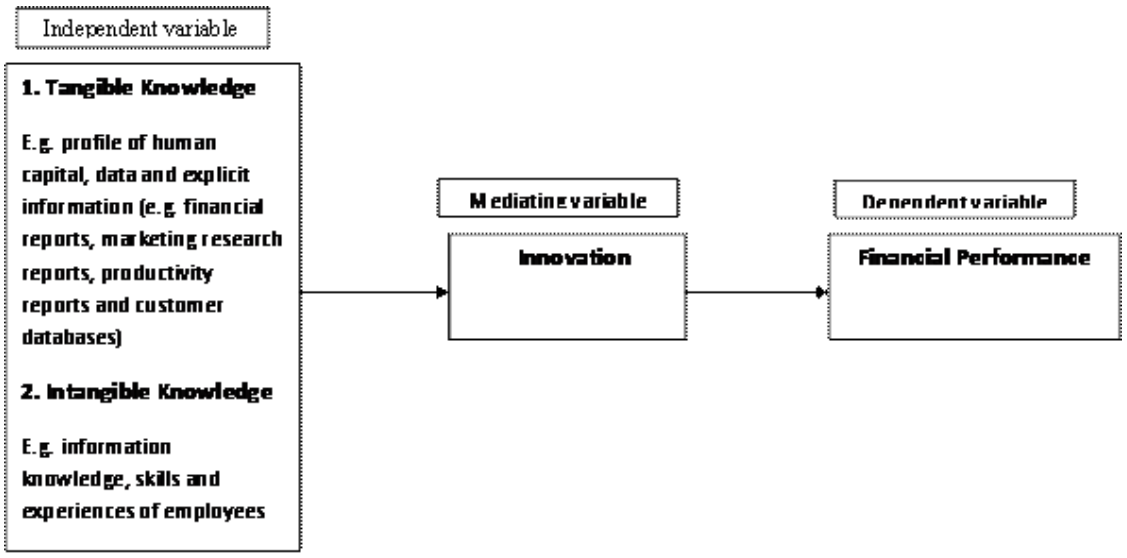

Figure 1: The Theoretical Model

5.2. Hypotheses Development

The hypotheses of this study are developed as following:

H1: Tangible knowledge is positively related to Innovation
H2: Intangible knowledge is positively related to Innovation
H3: Tangible knowledge is positively related to Financial Performance
H4: Intangible knowledge is positively related to Financial Performance

6. Conclusion

This paper puts knowledge management into the wider concept of learning economy and shows how a key element of knowledge management is to enhance the learning capacity of the firm, also, specialist knowledge managers may play a role in initiating processes of organizational change in the right direction together with managers in charge of innovation. This study has advanced the knowledge in the field of KM, especially among the Iranian Industrial organizations. Besides identifying and subsequently reinforcing the importance of the various KM success factors, this study has also identified the level of KM implementation in these companies. This paper argues that knowledge takes on a number of roles: 1-knowledge is tangible and intangible 2-having access to knowledge supports any decision making about resources 3-a capability in knowledge management enables those within a firm to leverage the most service from knowledge and other resources 4-effective knowledge management makes contributes to innovation and performance. This paper suggests that the term intangible assets is reserved for assets that have a significant tacit knowledge component, such as organizational culture, relationships with supplies and customers and the experience and intellectual capital of employees. It is hoped that the findings would help the Iranian organizations to undergo self-check of the various success factors proposed so that actions can be taken to overcome the gaps. The findings would also provide important and useful guidelines to other industries on how to successfully deploy a KM programme.

7. Refereences

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