The Role of Knowledge Management in Manufacturing Companies in Jordan

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Abstract

The aim of this study is to identify the extent of knowledge management activities that are practiced by manufacturing Companies in the Hashemite Kingdom of Jordan, knowledge management is the ability to link structured and unstructured information with the changing rules by which people apply it. It is not a technology, but a strategic solution that applies information technologies. The present study concluded that: manufacturing Companies was successful in establishing its own concept of knowledge management, the results shows that knowledge management activities practiced were mostly high. There was a positive statistical relationship between knowledge management strategy and practice degree of knowledge activities. There is no effect was reported for demographics (sex, age, qualification, experience years, and section) on practicing degree of knowledge management activities in manufacturing Companies. The results indicate that there is no statistical differences relate to education, experience, management level variables in the role of knowledge management at the level of significance $\alpha < 0.05$ in all activities. Study recommended that Researcher recommend his colleagues that are necessary to expand in knowledge management concept study for its importance in organizations support advantage. Researcher recommends organizations to adapt manufacturing Companies approach in knowledge management concept, through practicing activities related to this concept. In the researcher view, it is necessary to held training courses to the employees who are in manufacturing Companies to recognize the knowledge management concept and its principles, and its importance, to better understand their role in knowledge management in all activities.

Keywords: Knowledge Management, manufacturing Companies, Knowledge Management process

1. Introduction

This study will highlight the nature of knowledge and knowledge management in manufacturing Companies that considered as one of the leading high- tech companies in Jordan.

This research tries to adopt and validate knowledge management instrument which enables manufacturing Companies to characterize initiate knowledge management profile. It is not a new idea. It is not a single tool, but an overall discipline, a systemic strategy of how to create and deliver information and provide information processing tools to enable workers to accomplish work.

knowledge management (KM) and innovation are seen as major strategic options, which can significantly enhance an organization's ability to effectively respond to fickle customer requirements and changing technologies, thus maintaining their competitive performance in today's turbulent business environment (Damanpour et al., 2009; Chen et al., 2010; Andreeva and Kianto, 2011; Dahiyat, 2015).

The importance of this study is to show the effects of knowledge management in the management systems in the manufacturing Companies. The problem of this study is that to identify knowledge management concept in manufacturing Companies. This concept still has ambiguous. The purpose of this study is to measure and validate a knowledge management concept in manufacturing Companies. It should help managers to initiate a knowledge management portfolio for manufacturing Companies.

2. Literature Review

2.1 Knowledge Concept

Gupta and McDaniel, (2002) argue that knowledge is referred to as an expensive commodity, which, if managed properly, is a major asset to the company. Knowledge is a complex and fluid concept. It can be either explicit or tacit in nature. Explicit knowledge can be easily articulated and transferred to others. In contrast, tacit knowledge, which is personal knowledge residing in individuals' heads, is very difficult to articulate, codify and communicate.

Medakovic, Dj. (2010) introduced a study deal with the issue of converting knowledge into improved performance, to improve the understanding of knowledge management. The model linking knowledge with performance is presented. Managing knowledge so as to improve performance is less well discussed.

Drucker (2004) indicates that nowadays society is knowledge based society and argues that the knowledge society has to be highly specialized to be productive and need to apply two new requirements:

1. Knowledge workers work in teams; and

2. Knowledge workers have to have access to an organization which, in most cases, means that knowledge workers have to be employees of an organization.

The conclusion of this study is that, there are social problems, the rise of knowledge workers and the emergence of the knowledge society will pose any number of new social problems and new social challenges which will occupy us for decades to come.

(Adams & Lamont, 2003) argue that, the role of knowledge management systems to create competitive advantage by making it difficult to develop and maintain, because of rapid technological developments, and the ability of competitors to watch and tradition of the organization quickly and therefore, the organization must blending resources, competencies and capabilities that they possess, and continually learns how to use this combination to develop and maintain competitive advantage. According to the study, knowledge management systems alone can not find and maintain competitive advantage and the role of knowledge management systems highlights through coming with the rest of the resources and skills that belong to the organization and study suggested model shows how the Organization can obtain a competitive advantage and maintain, this model consists of the following elements:

* Knowledge management systems that assist in the acquisition, storage, deployment, retrieval, and knowledge management.

* Information and knowledge are collected and disposed of through knowledge management systems, which are available to members of the organization to facilitate the development and the invention of goods and services and operations.

* Material and financial resources, human and organizational owned by the organization, affecting the organization's ability to benefit from the knowledge.

 * Internal processes such as: strategic planning, knowledge management; by which transfer information, knowledge and resources owned by the Organization to undesirable results.

* Career system through which to improve the level of goods, services, processes and the development of new goods and services.

* Permanent competitive advantage, which is the outcome of interaction between the above elements, and represent the organization's ability to achieve the level of performance is higher than the average obtained by competitors in the same industry.

John Thompson (2010) says that KM inspirationally may be said to hope to enhance the recording of existing knowledge, enable the transfer of existing knowledge from person to person, facilitate the exploitation of existing knowledge, and to stimulate the creation of new knowledge.

According to **Huck et al. (2011)** KM facilitates the sharing of tacit and explicit knowledge between individuals and across organizations to meet organizational knowledge needs

 (Feng et al., 2004) investigated to clarify the effect of the development of a knowledge management system for the organization's performance by comparing the performance of organizations that have adopted knowledge management systems with those that had not developed systems for knowledge management. Results showed that organizations that adopt knowledge management systems achieved a reduction in administrative costs and an increase in productivity during the second year of adopting knowledge management systems, and using the profit and cost ratios indicate the presence of important differences, because the financial performance of organizations that do not embrace the knowledge management systems fall with the passage of time, while it remains steadfast to organizations that adopt knowledge management systems.
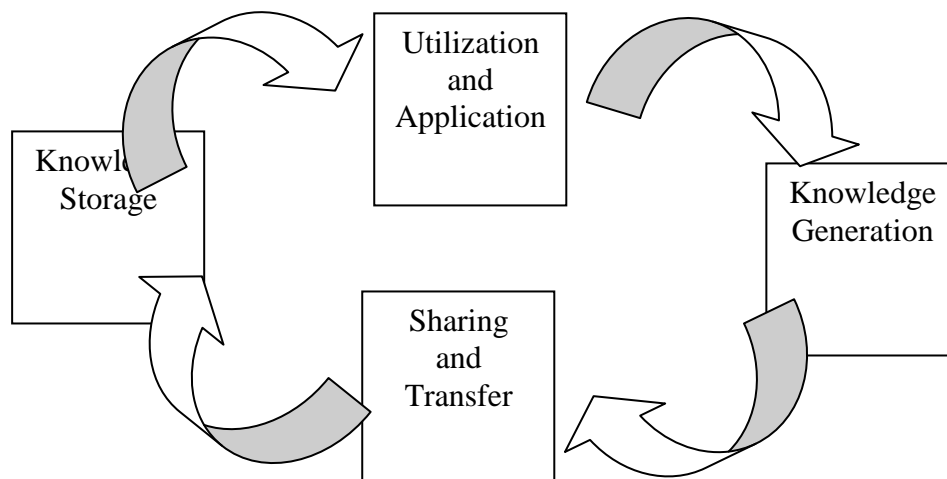
3. Research Model

Figure (1) Research Framework
Resource: researcher adapted

4. Methodology

4.1Research Hypotheses

H1: there is a statistically significant positive correlation between the knowledge Utilization and Application and manufacturing Companies activities services.

H2: there is a statistically significant positive correlation between the knowledge Generation and manufacturing Companies activities services.

H3: there is a statistically significant positive correlation between the knowledge Storage and manufacturing Companies activities services.

H4: there is a statistically significant positive correlation between the knowledge Sharing & Transfer and manufacturing Companies activities services.

4.2 Data Collection

To collect data from its own sources, researcher conducted a personal interview with four directors in manufacturing Companies questionnaire used to measure knowledge management practices in manufacturing Companies.

Study community consists of all the managerial levels in manufacturing Companies, 70 questionnaires had been distributed on random sample that has managers, department's heads, assistant managers and other sections heads for the manufacturing Companies. 63 questionnaires had been returned and 58 had been analyzing that mean about 75 percent from all responds, returned and analyzed.

4.2.1 Validity Tests

Content validity and construct validity of an instrument can be established through a correlation analysis. Pearson correlation test was used to establish the content and construct validity of knowledge management activities measurement instrument used and its strategy.

4.2.3 Reliability: Cronbach's Alpha Coefficient

Cronbach's alpha was used to test the knowledge management dimensions (Utilization and Application, Knowledge Generation, Knowledge Storage, Sharing and Transfer).

The Cronbach's coefficient alpha values for the all knowledge management activities more than (0.60), which mean its good result except knowledge acquisition activity. The greatest percentage is (.764) for Utilization and Application activity whereas the least percentage is (.239) of Knowledge Generation activity. The reason for the low value of consistency coefficient of paragraphs that measure this activity is the differences of viewpoint on the concept of   Knowledge Generation in manufacturing Companies.

5. Results

Table (1) Means and Std. Divisions of knowledge management dimensions:

Field	Mean	Std. Division	Agreement degree
Utilization and Application	4.57	.50811	strong
Knowledge Generation	4.27	.46732	strong
Knowledge Storage	4.58	.51557	strong
Sharing and Transfer	4.44	.52219	strong
Total	4.54		

Table (1) describes the descriptive statistics of knowledge management activities in manufacturing Companies is done in strongly degree of practicing in which general mean is (4.54). The results that are mentioned in table (1) indicate that all knowledge management activities have strong practicing degree.

5.1 Study Hypothesis Test

There is a statistically significant positive correlation between the knowledge activities (Utilization and Application, Knowledge Generation, Knowledge Storage, Sharing and Transfer) and its strategy. To test this relation researcher chooses Pearson's correlation, table (2) describes the test results.

Table (2) Pearson's Correlations between Knowledge management activities

		Utilization and Application	Knowledge Generation	Knowledge Storage	Sharing and Transfer
Pearson correlation		1			
	Utilization and Application	.576**	1		
	Knowledge Generation	-.066**	.486**	1	
	Knowledge Storage	.645**	.524**	.565**	1
	Sharing and Transfer	.610**	.518**	.764**	.619**
		.758**	.459**	.646**	.560**

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

The results revealed that there is a statistically significant positive correlation between the overall knowledge activities). The table indicates that there is the deference of correlation between the knowledge activities. These results indicate that the knowledge management methods which conduct in manufacturing Companies influence of all activities because this strategy will influence to the essential infrastructure of knowledge management.

6. Results and Analysis

The results revealed that there is a statistically significant positive correlation between the overall knowledge processes. The correlation of except Knowledge Generation was (-.066), the reason for this weak result is due to the differences of viewpoint of the concept of Knowledge Generation; the hypothesis was accepted. The table indicates that there is the deference of correlation between the knowledge management processes, the results indicate that the knowledge management methods conduct in manufacturing Companies.
Influence of services activates and the consequences of that the strategy will influence by the essential infrastructure of knowledge management. The results for dimensions measuring of the other knowledge management process: Utilization and Application (4.57), Knowledge Generation (4.27), knowledge Sharing and Transfer (4.44), knowledge application (4.50) hypothesis was accepted.

7. Conclusion

This study had employed data from manufacturing Companies belonging to the main manufacturing Companies in Jordan. Because a high response rate was attained, we believe that the results reflect the actual situation regarding the knowledge management in manufacturing Companies. Therefore, the findings reported here can be generalized to the larger population of manufacturing Companies in Jordan.

7.1 Recommendations

Researcher recommends his colleagues that are necessary to expand in concept study for its importance in organizations support advantage. Researcher recommend organizations to adapt manufacturing Companies approach in Knowledge Management Concept, through practicing activities related to this concept.

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