The Role of Knowledge Management Applications in The Adoption of E-Business in Business Organizations (An Empirical Study in the information technology companies in Jordan)

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Abstract

This study aimed to identify the role of knowledge management applications in the adoption of e-business in business organizations. In this study, the analytical descriptive method was adopted to analyze and extrapolate the results, through seeking the views of (193) employees in the information technology companies in Jordan. The objectives of the study were achieved through design questionnaire to gather preliminary information from the sample of study. has been using the statistical package of Social Sciences (SPSS) For data analysis.

The study found that the level of the employees assessment (the study of sample) to the knowledge management dimensions, was high, as the study showed a significant moral impact of knowledge management in adoption of e-business in the information technology companies in Jordan.

Keywords: Knowledge generation, Store knowledge, Apply knowledge, knowledge Distribution e-business.

Introduction

Organizations today face significant challenges imposed on it to live in a dynamic state to keep pace with forces and the continuous developments and changes in the internal and external work environment. This environment, with its various secretions made the organizations cannot work without the knowledge of the opportunities and threats to its external environment, like the economic, cultural, social, political, legal and natural environment and technology forces, as well as knowledge of the strengths and weaknesses that relevant to the internal variables like the regulatory learning, the organizational culture, the organizational behavior, the organizational distinction and other matters that determine the extent of the organizations benefit of the opportunities and face the surrounding threats.

Knowledge management has become as one of the modern topics in the world of management and enjoy the major concern, and increased its applications in different organizations. Knowledge management also took an introduction to the development of contemporary organizations and enable them to face future challenges in the third millennium. The importance of knowledge to business organizations, not only in the knowledge itself, but rather what pose to add value to it, and in the role played in the organizations transformation to the knowledge economy, which emphasizes the intellectual capital, knowledge and competitiveness, through human capacity more than the traditional elements such as land, money and labor.

Also, the culture of the distinction is one of the main pillars in improving the performance of organizations, which play a pivotal role in promoting the values, beliefs and behaviors of the employees in the organization, in order to move towards to apply total quality management. The culture of distinction is the prime engine of quality it is the backbone and the lifeblood of the organizations, which moves the customs, traditions and values shared by workers and language in which they communicate, So even advocates quality doesn't collide with obstacles that prevent the implementation of their programs they should Pay attention to the culture of the organization must be given adequate attention and optimization care, it's a serious obstacle prompted many organizations to failure because of the lack of interest in this kind of culture.

The theoretical framework for the study

The growing role of knowledge in the success of business organizations with their contribution to the transfer of such organizations to the new global economy, which has become known as the knowledge economy which emphasizes the intellectual capital and knowledge to compete through human capacity, as well as its crucial role in transforming organizations to communities of knowledge, which occur change the root of the organization to adapt to the rapidly changing in its environment. From here, defining the concept of the knowledge gained special importance To illustrate this concept proceed from **(stronmgulst&samoff,200) t**he confirmation that the concept of knowledge in the social sciences includes one of the main entrances, or both.

The first refers to the regular experiments and test hypotheses which refers to the objective and explanatory models to understand the surrounding, and the most common trends in social and economic sciences tend to experiment and proof for the development of a causal relationship between the variables and separate them to determine their independence. The second entrance is the entrance of anthropology and history, which highlighted the overlap between all social forces and which prefers the unit than the separation and management science focuses on the first entrance.

The Don Marchand (Basrdh is ,2006) the first to use the term "knowledge management" by nearly three decades, And then rolled the names of the early pioneers of knowledge management so the concept came to what it is now. In general, we can say: The accumulation of knowledge and the changes that the world has seen at the end of the last century and the input of the Beckmann coefficient and the World Bank and the Japanese companies were the first seeds of the birth and the development of knowledge management models and its applied standards.

What is knowledge management and how it can be measured? and what are the core elements?

The researchers the addressed concept of knowledge management from different angles depending on the intellectual background and the purpose of studies which touched

this topic, there are those who looked at it as a technical term that facilitate the dissemination and application of knowledge, (Malhohra, 2002) defined it as the embodiment of the regulatory processes that are looking at the process of blending information technology's ability to process the data and information and portability of creativity and innovation for people ". Others dealt with it from the angle focusing on the cultural and social aspects, (koening, 1999) Defined it as the conscious and intelligent understanding of the organization culture and the ability to use and apply the change in this culture, " And others considered it as an intangible exists, (Darling, 1996) see that a knowledge is an intangible exists of the organization and include extensive experience and outstanding method of management and the accumulated culture of the organization, and others define it from a financial perspective, Others are focused on giving the concept of knowledge management from the perspective of being a development of information and management of documents and (Hackett, 2003) defined the knowledge management as an integrated systematic entrance to manage and activate the participation in all the assets of the organization's information, including databases, documents, policies, procedures as well as the experience and the earlier expertise carried by personnel. And (Qubaisi, 2005) defined it a comprehensive definition he derived it from several definitions within multiple areas as "the term that expressing the processes, the tools and the behaviors that participate in its formulation and performance the beneficiaries of the organization, for the acquisition and storage, and distribute the knowledge to reflect on the business processes to reach the best applications with a view to long-term competing ". The new challenges of globalization and the free exchange generated substantial pressure on all organizations noted that they move to a global economy more interdependent and integrated to find a long-term competitive advantage.

The importance of knowledge management highlights as the equivalent of the most possession of value and most effective competitive advantage used and, in general, there are many reasons increase the importance of knowledge management and increase the need for their applications, and perhaps the most important of these reasons (Assid, and the Harem, 2004):

- Increasing the intensity of competition in the market and the increasing speed of new innovations and discoveries.
- increasing competition has reduced the number of employees in organizations with a distinct knowledge and here it was necessary to compete on how to attract these competencies.
- Complexities of goods and services require more knowledge of the needs of customers and the market and the competition and then to a strong knowledge management.
- Reducing the length of time it takes workers to get new knowledge.
- Lower life cycle of products.

And the knowledge management system requires a special tools uses and computer networks, and the electronic- mind programs, as well as dealing with the stimulus programs of the organization (laudon,2001).

Measuring Knowledge Management

The biggest challenge faced by knowledge management at the beginning of its appearance is difficult to measure, even some of them denied something called knowledge management, A platform that (what cannot be measured cannot be managed) and the difficulty in measurement derived from that we are dealing with intangible assets, and this

has created a gap between theory and practice in knowledge management. There have been serious attempts to measure knowledge management some of them got a good results and accept the prestigious centers in this area.

Following is the presentation of some knowledge management measures:

(AMS) Organization Put its own measure depends on the collection of stories from customers and employees who are documenting the value of knowledge management initiative, Workers and the organization and the customers are the scale for knowledge management, As the American Association for Training and Development (ASTD) to develop a tool to measure the readiness of the Organization for knowledge management and identify those where intellectual capital. It is a (10) Questions of three options (categorical denials, AC, positive) and the points are calculated to know the degree of readiness of the organization for knowledge management between the three levels of (NITC, 2004). And also (Andersen, 1996): develop a tool to test the ability of organizations to manage the knowledge called (knowledge management assessment tool KMAT) is a (10) questions will be answered by one of five options in the light of the points group to the organization are classified among four levels of knowledge management which is the highest score down (the leading organization in the field of knowledge, the organization going in the foreground, the organization is moving in the right direction, the organization needs to distinct improvement).

Bejerse scale: includes four basic indicators and (89) sub-items distributed on it to identify the knowledge gap, sharing knowledge, buy and develop knowledge and assessment of knowledge.

(Heisig & Vorbeck, 2000) Scale, who developed a survey tool to measure the processes of knowledge management for the best of (1000) German companies and (200) European companies included six operations is to determine the knowledge, the formulation of the goals of knowledge, knowledge generation, storage knowledge, the distribution of knowledge, and the application of knowledge.

The most important thing in the concept of knowledge management about its elements that consisting of:

Knowledge management processes

knowledge management processes known as identifying the mechanisms that are used in order the knowledge to be available to the designated activity and is thus resulted in knowledge management processes in accordance with the repeated requests and the need for logical and activity required to find the knowledge for it, In each stage, the need to be a certain type of knowledge, it is clear that the essence of improving knowledge management is to improve the knowledge management processes, one of the Surveys included the heads of American companies that won (Malcolm Baldridge)of the national quality about the most important challenges facing the business, Appeared that the first challenge is to become more global companies (98%), and the second challenge is to improve knowledge management, which was confirmed by (88%) percentage. Therefore, the study suggests that the knowledge management processes are interdependent and sequential ring despite differences researchers in determining its number and precedents, and it will adopt the knowledge management processes identified by each of (Martins, et al, 2001) which are:

a. **Generate knowledge**: that the process of knowledge generation begins with the idea offered by makers of knowledge through acquisition or innovation and is one of the keys available to the organization for the long term, The usual way to generate knowledge as the converting data into information and knowledge is a process that begins to collect data from multiple sources and are stored in the database, so that it

can be re-processed, and as a result of these activities is to generate knowledge. But the difficulty surrounding the generation process is the tendency of many presidents to non-ratification of the idea, especially in developing societies, including the Arab world. However, the maker of knowledge co-wide participation in the learning expected him to have more capabilities to innovate and generate new ideas.

b. Storage of knowledge: refers to the Search, Retrieving, Keeping and Maintenance. storage and keep knowledge is very important especially for organizations with high labor turnover and facing the risk of losing tacit knowledge, especially when individuals leave the organization. (Miklod: 2000) Pointed to the existence of two types of storage units are: -

   Sequential Storage It uses magnetic tape to store the cumulative knowledge.

Direct Access Storage it uses magnetic disk as the inventory can be read for many years, (Turban; 2001) emphasized the need for a knowledge base and determine the amount of the open part of that base. That the value of knowledge does not depend on the moment of its generation, but on the remote value of knowledge must therefore maintain repositories of knowledge.

c. **Application of knowledge**: means to make it more suitable for use in the implementation of the organization's activities and more closely related to the tasks carried out by, On the basis that the Organization supposed to effective application of knowledge to take its advantage after filing, storage and develop ways to retrieve and transfer to the workers.

And the knowledge is applied through two types of operations (Ali, Alguendhilji and Omari, 2004):

- ▪ ***Oriented processes (direct):*** means the process by which individuals addressing the knowledge directly toward the other act without moving or transferring knowledge to the person who has been knowledge.
- ▪ ***Knowledge routine:*** means the use of knowledge that can be obtained from the instructions and regulations, rules and models that guide others toward the future behavior.

d. **Distribution of knowledge:** (Coaks, 2003) Shows that the process of knowledge distribution is the first step in the process of the use of knowledge, which means the distribution of knowledge, "deliver the (appropriate) knowledge, to the (appropriate) person at the (appropriate) time, and in the (appropriate) form, and with the (appropriate) cost. And the distribution of knowledge depends on the existence of effective mechanisms which allow that, these mechanisms can be formal, such as reports, training and work guides, and planned official meetings and learning during the work, or informal such as meetings, symposia and panel discussions that take formalized codified and are usually done in a non-working hours.

The study problem and questions

Since the potentials and energies that organizations enjoyed in dealing with the knowledge management were limited, this will expose those organizations to failure and making mistakes when implementing their operations based on the knowledge economy. This requires these organizations to find a new mechanism as to how to be able to work at all levels and with high efficiency to face that, with the need to find a formula of control over the application of this mechanism to determine the prospects of dealing with changing its data. Based As mentioned earlier, this study comes to answer the following questions:

The first question: What is the knowledge management Applications in the variables (knowledge generation, knowledge storage, application of knowledge, the distribution of knowledge) in the of the adoption of e-business in business organizations ?

Second question: What is the level of assessment of employees (study sample) information technology companies in Jordan to the dimensions of knowledge? management?

The third question: What is the level of assessment of employees (the study sample) information technology companies in Jordan to the dimensions of the e-business?

Hypotheses

In order to reach a logical solution to the problem of the study, based on sound scientific methodology, the following nihilism hypothesis has been developed:

HO1: There is no statistical significant impact When the level of significance (0.05≥α) for Knowledge Management Applications t according to its dimensions (knowledge generation, knowledge storage, application of knowledge, the distribution of knowledge)In the adoption of e-business in business organizations (An Empirical Study in the information technology companies in Jordan)**.**

 Objectives of the study

This study seeks to achieve the following objectives:

1.Identify the effect of some variables related to knowledge management in the information technology companies in Jordan.

2. identify the views of the upper and middle (the study sample) departments in the surveyed organizations, About Variables the of knowledge management and e-business.

3. It shed light on the functions of knowledge management and supply the business organizations with the appropriate observations and evaluation about the perceptions of workers in these organizations for their importance.

4. accessibility to results can make in its light appropriate recommendations to deal with knowledge management, so that is working to provide an adequate data base, helps the surveyed organizations in dealing with knowledge management, to enable them to lay the standard foundations and proper standard to deal with.

Importance of the study

This study also acquires its importance in the following considerations:

1. The study can considered as an Administrative Studies that dealing with the role of knowledge management in the in business organizations.

2. This Study is an extension of previous studies, which have a direct relationship with its variables whether independent or dependent, it is expected that this study serves as a breakthrough for further studies in the field of knowledge management, by providing mechanisms to guide organizations and help them to identify the functions of knowledge management.

3. Study could provide scientific modest addition in the previous study of the role of knowledge management in the Knowledge Management Applications   in business organizations, and also provides a quite aside of information and data on this subject, which contributes to enrich the Arabic library in general and the Jordanian library in particular.

The study model

To achieve the purpose of the study and access to its specific objectives, the researcher adopted the following form to examine the relations of the variables of the study. Figure (1) these relationships.
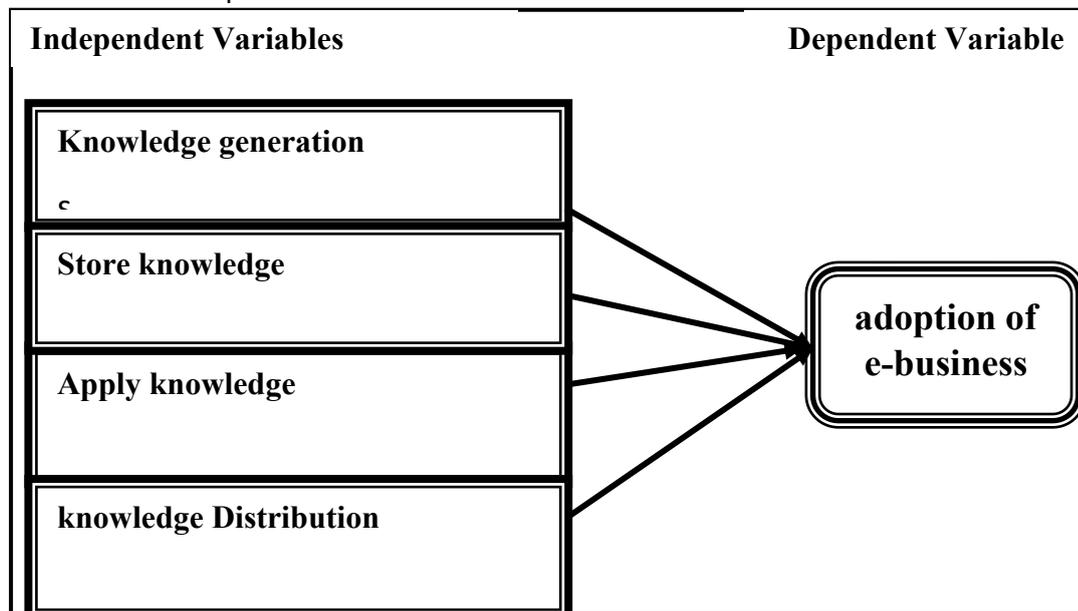
(Figure 1) The study model

Design and Methodology

The researcher uses a deductive approach which is more likely to work with quantitative data in order to answer the questions about relationships among measured variables with the purpose of explaining, predicting & controlling phenomena. Thus, the aim of a deductive approach is to generalize from a sample to a population (Leedy & Ormrod, 2001).

The design was quantitative because the data took a numerical form. That is, by employing a deductive approach with a quantitative research method, the researcher has been able to measure & analyze the relationship between influencing factors. This approach also allows for testing the research hypotheses & generalizing the research findings to the population (Zikmund, 2003).

The methodological approach in this research is a descriptive one, because the researcher attempts to identify, explain variables of this research & to describe the relationships between these variables in order to provide a picture of a particular phenomenon, but not to ferret out cause-effect relationships (Churchill & Iacobucci, 2002).

Society and the study sample

The study population consisted of all managers and heads of departments in the management of human resources, procurement, storage and supply operations in information technology companies and the 1500 Totaling employees according to records of human resources for the Companies.

The study sample was relying style simple random sample of the employees of managers and heads of departments in the Jordanian IT companies and 10% of the study population of 1500 respondents singled out as the number of sample 150 employees.

instrument of the study:

For the purpose of getting the data and information for the Implementation of the purposes of the study, was the adoption of the following tools:

1. Information on the theoretical side of the studies, and scientific books that specialized in the study subject
2. Questionnaire, a cognitive measuring instrument relied in its determination to the views of a group of writers and researchers in the subject area for the primary and secondary data needed to complete the practical side of the study, the questionnaire included questions with multiple tests where the questionnaire consisted of two parts.

Statistical methods used in the study

The researcher used SPSS software to test the study's hypotheses by using different statistical Methods, these Methods, these Methods are:

1.Cronbach's alpha: used to test the reliability of the scale.

2. Means and standard deviations for the variables, to explore the existence and importance of every variable according to the sample of the study. If the mean value of the statement is more than or equal to 3.67, then the level of agreement with the statement measuring a certain variable is high, if the mean value ranges between (2.34 – 3.66), then the level of agreement is medium and when the mean value of the statement is equal to or less than (1-2.33), then the level of agreement with the statement is low. Table (2), shows the means and standard deviations for independent variables study.

3. Data were entered into SPSS according to the Likert scal. The instrument of the study was scaled as follows: Strongly disagree Disagree Undecided Agree Strongly agree.

4. Test the hypotheses using regression analysis

Results of the Descriptive statistics for the study questions

The arithmetic mean and standard deviation was extracted of the study questions for the independent and the dependent variables and have been summarized in Table (1).

Table (1) Averages and standard deviations for the study sample answers related to the dimensions of knowledge management and adoption of e-business

Variable	Arithmetic mean	Standard deviation
Knowledge management Applications	3.81	.940
adoption of e-business	3.78	1.06

Testing the study hypothesis

Researcher's work in this side to test the study hypothesis, where the mission of this item focused on testing the extent to accept or reject the hypothesis of the study through the use of multiple regression as follows:

Hypothesis of the study:

HO1: There is no statistical significant impact When the level of significance (0.05≥α) for Knowledge Management Applications t according to its dimensions (knowledge generation, knowledge storage, application of knowledge, the distribution of knowledge)In the adoption of e-business in business organizations (An Empirical Study in the information technology companies in Jordan)**.**

(Table 3) the results of multiple regression analysis test to knowledge management Applications with its variables in adoption of e-business .

Statement	R	R Square	F Calculated	F Tabulated	β	Sig.

					Regression coefficient	
The impact of knowledge management Applications in the adoption of e-business	0.721	. 0.520	73.809	. 4.00	0.799	.000

* Statistically significant at the level of significance ($\alpha \leq 0.05$)

The statistical analysis results showed the presence of a statistically significant effect of the knowledge management dimensions (knowledge generation, store knowledge, application of knowledge, the distribution of knowledge) in the information technology companies in Jordan, If the correlation coefficient reached 0.721 R at the level ($\alpha \leq 0.05$). The determination coefficient R2 has reached (0.520)means that a value of (0.520) from the adoption of e-business achieving is resulting from changes in both types of knowledge management, the effect value reached β(0.799(, this means that one degree increase in both dimensions of knowledge management leads to an increase In the adoption of e-business This confirms the significant influence the calculated value F, which amounted to (73.809) which is at the level ($\alpha \leq 0.05$(. Compared with tabular F value of (4.00), and therefore the alternative hypothesis accepted, which states:

There is a statistically significant effect for knowledge management Applications with its variables In the adoption of e-business the information technology companies in Jordan.

Results of the study
- The presence of a statistically significant effect for Knowledge Management with its variables (knowledge generation, store knowledge, application of knowledge, distribution of knowledge) in the adoption of e-business in the information technology companies.
- The study found that the level of the employees assessment (the study sample) to the Knowledge Management Applications dimensions, was high.
- The study found that the level of the employees assessment (the study sample) to the Adoption of E-Business dimensions, was high. Recommendations:

Researchers review a series of recommendations, as follows:
- Working on creating a stimulating culture, encouraging and supportive of the production of knowledge, participate and share it.
- Attention in the application of knowledge management through participation in the internal and external information networks and the development of skills of workers and increase their ability to use these networks with respect to create and transfer the knowledge, disseminate and exchange and utilize it.
- Work on removing all obstacles that prevent the knowledge coming to individuals, productivity and administrative units.

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