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Implementing Knowledge Management as a Strategic Initiative: Exploratory Study in Jordan

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A study on Implementing Knowledge Management as a Strategic Initiative was conducted on a sample of various categories of organizations in Jordan. The categories were group of companies in the sectors of government Ministries and Departments (11), educational and training institutions (8), General trading & financial companies (15), computers and IT companies (23), insurance companies (14), banking and financial sector (19), medical and pharmacy (9), manufacturing sector (17), marketing (6), and mobile and communication companies (4). About 126 questionnaires were returned and the preliminary findings showed about 29.36% of the respondents were reporting that they already established formal knowledge management initiatives in their respective organizations. This was evident amongst organizations in the Mobile & communication, insurance and banking sector .Nonetheless, the findings also showed that the Jordanian government, private and manufacturing sectors were slowly catching up to meet the challenges of the competitive business environment.

Field of Research: Strategic management, General management, Knowledge management, Exploratory studies, Jordan

1. Introduction

Knowledge and innovation played an important role in the development of society. The transformation from an agrarian society to the information society has largely been brought about as a result of accumulation of knowledge through the centuries. Knowledge by its very nature depends on other knowledge to build on. Knowledge creation is, in fact, a process of value addition to previous knowledge through innovation (Duffy, 1999; Narayanan, 2001).The key to economic success is always linked to the advances in knowledge creation and the ability of a nation in translating knowledge into products and services. But while knowledge existed since the existence of mankind, it is only recently that it has been recognized as a factor of production. Many people have recognized that knowledge is the only meaningful economic resource in the knowledge society (Foray & Lundvall, 1996; Johnston & Rolf, 1998).

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Knowledge creates knowledge and in the process brings competitive advantage and leads to wealth creation. (Prusak ,1999).The key characteristics identified from leading companies that have successfully leveraged their assets provide a fertile ground for developing a knowledge management strategy. Companies that want to leverage this asset must approach knowledge management with a focus on their core competencies and tie those in very tightly to the business strategy and vision (Tiwana, 2000).

Today in the 2Ist century we must realize that knowledge management is a way or concept of doing business that revolves around the following four processes (Rahman, 2004): (1) Gathering Bringing information and data into the system; (2) Organizing: Associating items subjects, establishing context, making them easier to find; (3) Refining: Adding value by discovering relationships, abstracting, synthesizing, and sharing; and (4) Disseminating: Getting knowledge to the people who can use it. Moreover, organizations with knowledge management initiatives have higher performance than the organizations that have not those initiatives. According to (Rahman, 2004) knowledge management initiatives are as the following:

- Knowledge management phases; Investigation, review, preparing, implement and monitor.
- The steering of knowledge management. The people, department, or any one who is/ are in charge of steering knowledge management in organization.
- The Source of knowledge management (KM) initiatives. IT, Research, Training, KM Networks, and Job Process/ redesign
- Implication of lack of knowledge management initiatives.
- Barriers of implementing knowledge management

It seems that knowledge management is strategic implementation to any organization. This research studies to what extend Jordanian companies in different sectors implement knowledge management as strategic choice to increase their competition value.
To achieve this goal, researchers prepare a questionnaire with multi items derived from a study of knowledge management initiatives (Rahman, 2004) and conduct it on 126 Jordanian organizations in different sectors.

This paper is organized in eleven sections. The first is the introduction where the research problem is stated and underlined. In the second section, knowledge management concept is defined and different definitions are stated. Knowledge creation process are discussed in the third section Knowledge management and its relation to competition value are discussed in section four. In section five, knowledge creation enablers are argued. Failures and successes of knowledge management implementation are discussed in section six. How to facilitate knowledge creation in organization is discussed in section seven. In section eight, the research background is stated and justified. The research methodology and data analysis are discussed in section nine. The research data analyses, as well as knowledge management initiatives are discussed in section ten. Finally, the research conclusion and future research are stated in section eleven.
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2. What is KM?

The word knowledge can be defined as an understanding that is acquired through personal experience or the study of factual information. Knowledge Management is a concept in which an enterprise gathers, organizes, shares, and analyzes the knowledge of individuals and groups across the organization in ways that directly affect performance. It is about helping people communicate and share information. Knowledge Management envisions getting the right information, in the right context, to the right person, at the right time, for the right business purpose (Seiner, 2000)

3. Knowledge Creation Process

Pourkomeylian (2001) studied the impact of knowledge creation on Software Organizations and how can they improve organizational processes through proposing a model to fulfill that. The proposed model starts with an Initializing phase which contains context selection, charter infrastructure and sponsorship construction. The second phase is the Diagnosing phase which diagnoses current and desired states, develops recommendations, sets priorities, develops an approach, and plans actions. The next phase is the acting one. During this phase refinement, prototypes and real implementation take place. The last phase is the Learning phase.

Daamsgard and Scheepers (2001) illustrated in his paper the various sub-processes of knowledge creation process. These sub-processes are similar to those introduced by Pourkomeylian (2001). The first is Socialization which converts tacit knowledge between individuals after that knowledge acquired through direct interaction. The second is Externalization which codifies tacit knowledge into forms that can be understood by others. To do so, intentions, beliefs and norms must be identified. The third is Combination which involves the conversion of explicit knowledge into more complex sets of explicit knowledge. The fourth is Internationalization which refers to the conversion of the explicit knowledge into the organization's tacit knowledge. It usually takes place through learning-by-doing, training, and exercises.

Topp (1999) research illustrated a systems approach to knowledge creation based on three subsystems. These subsystems are: Formative System, Conversation System, and individual Subject. The Formative System which enables or regulates what can be said and thought by individuals within a specific business situation. The Conversation System which assesses the nature of conversations and ranks them to be either regulative or generative. The Individual Subject contains a set of predefined concepts, procedures, patterns and stakes that guide their actions.

Klint and Verhoef (2002) introduced a research paper which illustrates that knowledge management should be an essential headline in the strategy of every modern organization. It also illustrated that knowledge management has managerial as well as technical aspects.

The paper introduced five steps used for knowledge creation. These steps are Sharing Tacit Knowledge, creating a concept, justifying a concept, Building a Prototype, and Cross-leveling Knowledge. Sharing Tacit Knowledge which implies that knowledge should be shared among all employees within an organization and they all should participate in its contribution. Creating a Concept is another step which means that there should be one main concept under which all studies should be carried out and all resulting knowledge should falls between its edges.

4. Knowledge Creation as a Key Competitive Advantage

Major economics and business theorists have pointed to knowledge as the ultimate competitive advantage for the modern firm. It is a resource hard to imitate, difficult to co-opt, giving its possessor a unique and inherently protected commodity. Therefore, any techniques or methods that sustain knowledge growth and distribution are key to the success of today's organizations.

Given the dynamics of hyper-competition and globalization, the resulting reinvention of businesses and pressure for innovation, and the related realignment of corporate activities, the efficient transfer of existing but dispersed knowledge, as well as the effective creation of new knowledge, have become two major management tasks (Kothuri, 2002).

5. Knowledge Creation Enablers

Klint and Verhoef (2002) drew the attention to knowledge enablers which are the different issues behind the successful creation of knowledge and support its evolving in the backend.

First, Instill a Vision: People working on knowledge creation should be aware of knowledge vision in order to have the creativity working it out.

Second, Manage Conversations: The conversations which take place during the knowledge creation or demonstration should be well managed in order to guarantee positive results.

Third, mobilize Activists: Knowledge Activists are the facilitators of the knowledge creation process. They should make the right contexts and connections with the global knowledge vision.

Fourth, Create Right Context: It implies that the right tool or context should be adopted during the process of knowledge creation. Knowledge context limits the scope of the information that should be studied during the process.

Fifth, Globalize Local Knowledge: All created knowledge should be spread across the organization in order to give everyone an equal chance to participate in the re-creation, packaging, and dispatching of the created knowledge.

6. Success or Failure Factors

Stenmark (2003) studied the factors (7 factors) behind the creativity of any organization. It relates organizational creativity to its capability to create knowledge. These factors are;

No-Preconceptions Principle: It indicates that the opportunity to innovate and the source of innovation are both uncertain and unpredictable.

Autonomy: It indicates that an organization must depend on its user's initiatives in order to reach the unexpected. It must not always depend on what is planned only.

Serendipity: It studies the different possibilities of promoting serendipity and stand in the face of sudden and unexpected accidents.

Diverse Stimuli: It studies the different stimuli behind the innovation of an idea taking into consideration that what stimulates one person may not even be noticeable to another.

Rich Information Provisions: Although information may be seen one stimulus among many others, it has a more profound importance, strength points and weakness points as well.

Internal Communications: It illustrates how internal communications within an organization reduce organizational stress and standpoints conflicts and thus improve organizational creativity.

Motivation: It is apparently clear that one can do certain job with much more creativity if he/she has the self-motivation to do it rather than being motivated by someone else.

7. How to Facilitate Knowledge Creation?

Chou and Mong-Young He (2004) studied the possibility of facilitating knowledge creation through the use of knowledge assets. Hence, it needed to study the different relationships between knowledge assets and the four components or processes of knowledge creation. The study depends on the information provided by the concerned people about knowledge assets and their relation to knowledge management. It also explained knowledge assets from a certain previously explained perspective.

Knowledge assets are the bases of the knowledge-creating processes, where assets are firm-specific resources that are essential to create competitive advantages for the firm. It specifies that the effectiveness of knowledge creation on the surrounding circumstances and are influenced by the contexts. The paper comes up to a result which tells managers that adopting appropriate tools or context will facilitate the process of knowledge creation. These tools include knowledge assets. This makes us come to saying that if knowledge creation was supported by certain tools or contexts which might push the credibility of the knowledge. This might increase organizational trust towards created knowledge.

8. Research Background

The processes of knowledge creation, dessimanation, absorption as well as enablers are significantly contributed to organizational performance in the world of business. Very few studies or it might be rare ones that discuss these processes and its initiatives in the country such Jordan. In this paper, the authors discuss some of these issues. These issues are as the following:

- Knowledge management phases; Investigation, review, preparing, implement and monitor.
- The steering of knowledge management. The people, department, or any one who is/ are in charge of steering knowledge management in organization.
- The Source of knowledge management (KM) initiatives. IT, Research,

Training, KM Networks, and Job Process/ redesign

- Implication of lack of knowledge management initiatives.
- Barriers of implementing knowledge management

9. Research Methodology and Data

A questionnaire with multi items derived from a study of knowledge management initiatives (Rahman, 2004) was prepared and conducted on **126** Jordanian organizations indicated that 37 or 29.36% were reporting that they already established formal initiatives in knowledge management on their respective organizations. The remaining 89 or 70.64% of the respondents still did not have the formal approach in knowledge management (KM). The practice of KM was evident amongst organizations in the mobile and communication and insurance sectors. For examples, 3 out of 4 (or 75%) respondents from the mobile and communication sector reported to have formally implemented the knowledge management approach in their organizations. this followed by insurance sector *(64%)* However, the private sector, represented by General trading & financial companies and manufacturing recorded a relatively lower rate of Formal KM initiative. Amongst the practiced formal KM, 13% of General trading & financial companies, 12.5% of educational sector and manufacturing only 12%. (See Table 1).

Table 1: Comparison of Formal KM Initiative amongst Different Sectors.

Sector	Formal		informal		Total
	No	(%)	No	(%)	
Mobile & communication	3	75%	1	25%	4
Insurance	9	64%	5	36%	14
Banking & financial	7	37%	12	63%	19
Medical & pharmacy	3	33%	6	67%	9
Government	3	27%	8	73%	11
Computers & IT	6	26%	17	74%	23
Marketing	1	17%	5	83%	6
General trading & financial companies	2	13%	13	87%	15
education & training	1	12.5%	7	87.5%	8
Manufacturing	2	12%	15	88%	17
Total	37	29.36%	89	70.64%	126

10. Discussion

A further analysis of the 37 organization that had formal knowledge management initiatives revealed they were not progressing on the similar state. 12 of these organizations were at the "'investigation" state, 11 at the "review" state, 6 at "preparing" state, 7 at "implement" state and 1 at "monitor" stage.

The KM approach could be considered as relatively new in the Jordanian organizations and companies context as most of the organization were at the initial phases of formal KM (Investigation, review, preparing) . (See table 2).

Table 2: Number of Companies in each KM phase

Sector	number of companies in each stage					
	Investigation	review	preparing	implement	monitor	Total
Mobile & communication	0	0	0	2	1	3
Insurance	5	1	1	2	0	9
Banking & financial	1	4	1	1	0	7
Medical & pharmacy	2	0	1	0	0	3
Government	2	1	0	0	0	3
Computers & IT	1	2	1	2	0	6
Marketing	0	1	0	0	0	1
General trading & financial companies	1	1	0	0	0	2
education & training	0	0	1	0	0	1
Manufacturing	0	1	1	0	0	2

10.1 Personal Responsible:

It was observed that the board of director (12 respondents) was the most common group in steering the knowledge management initiatives in these organizations; this was followed by named position from IT (10 respondents), chief knowledge officer (6 respondents), individual department head (4 respondents), the owner of the organization (3 respondents),and named position from finance (2 respondents).
(See figure 1)

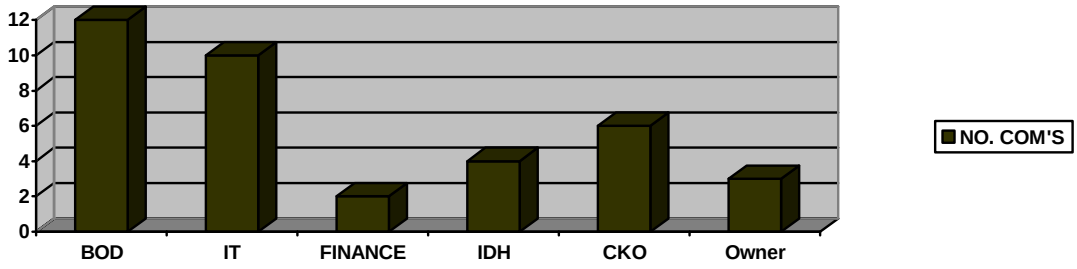

Figure 1: the steering of knowledge management

10.2 Source of Knowledge Management (KM) Initiatives

The survey showed that information technology department (IT) was considered the major and leading source of knowledge initiatives in these knowledge based organizations. Their roles mainly to capture and analyze corporate information and apply it strategically in the form of data warehousing and data mining, decision support systems and executive information systems. Despite this common belief, they were also thinking that every department should be equally responsive in creating and disseminating knowledge.

10.3 The main Source of Knowledge Initiative by Sector is given below:

1- In communication & Mobile sector "information technology" was the main source of knowledge initiative followed by "customer sales & services " and " development ".
2- In the insurance sector "information technology" was the main source of knowledge initiative followed by "customer sales & services " and "research".
3- In the Banking sector "research" was the main source of knowledge initiative followed by "information technology" and "customer sales & services ".
4- In the Medical & pharmacy sector "research" was the main source of knowledge initiative followed by "development" and" information technology" .
5- In the government sector "all department " was the main source of knowledge initiative followed by "development" and "information technology"
6- In the computers & IT sector "information technology" was the main source of knowledge initiative followed by "research" and "human recourse".
7- In marketing sector "customer sales & services" was the main source of knowledge initiative followed by "research "and "information technology".
8- In General trading & financial companies "information technology" was the main source of knowledge initiative followed by "research" and "human recourse".
9- In the education & training sector "development" "was the main source of knowledge initiative followed by" all department "and "information technology".
10- In the Manufacturing sector "development" was the main source of knowledge initiative followed by "research" and "human recourse".

Generally, in this survey it was evident that knowledge creation could be originated from different department with the pivotal role of information technology in providing physical support in terms of infrastructure such as technology enablers both hardware & software alike (table 3) and the role of information technology come in addressing aspects of knowledge repository, knowledge access and knowledge transfer involving technologies such as internet, intranet, database, Data warehousing, and data mining. That followed by the important role of research to achieve the knowledge (table 4).
amongst existing major knowledge initiative prevailed in these organization were knowledge management training (table 5) this followed by setting up informal knowledge networks within the organization (table 6) and using knowledge warehousing to enhance their job and/or process design (table 7).

Table 3: IT as Source of Knowledge Management

Sector	Yes	No	Total
Mobile & communication	3	0	3
Insurance	7	2	9
Banking & financial	7	0	7
Medical & pharmacy	3	0	3
Government	0	3	3
Computers & IT	6	0	6
Marketing	0	1	1
General trading & financial companies	1	1	2
education & training	0	1	1
Manufacturing	1	1	2
Total	28	9	37

Table 4: Research as Source of Knowledge Management

Sector	Yes	No	Total
Mobile & communication	2	1	3
Insurance	2	7	9
Banking & financial	5	2	7
Medical & pharmacy	2	1	3
Government	0	3	3
Computers & IT	1	5	6
Marketing	1	0	1
General trading & financial companies	0	2	2
education & training	0	1	1
Manufacturing	0	2	2
Total	13	24	37

Table 5: Knowledge Management Training

Sector	existing	within1-3years	withen3-5 years	Total
Mobile & communication	3	0	0	3
Insurance	7	2	0	9
Banking & financial	7	0	0	7
Medical & pharmacy	1	2	0	3
Government	1	2	0	3
Computers & IT	5	1	0	6
Marketing	1	0	0	1
General trading & financial companies	0	2	0	2
education & training	0	1	0	1
Manufacturing	1	1	0	2
Total	26	11	0	37

Table 6: Establishment of Knowledge Management Network

Sector	existing	within1-3years	withen3-5 years	Total
Mobile & communication	3	0	0	3
Insurance	9	0	0	9
Banking & financial	7	0	0	7
Medical & pharmacy	2	1	0	3
Government	1	2	0	3
Computers & IT	6	0	0	6
Marketing	1	0	0	1
General trading & financial companies	1	1	0	2
education & training	1	0	0	1
Manufacturing	1	1	0	2
Total	32	5	0	37

Table 7: Job/ Process Redesign

Sector	existing	within1-3years	withen3-5 years	Total
Mobile & communication	3	0	0	3
Insurance	6	3	0	9
Banking & financial	6	1	0	7
Medical & pharmacy	1	2	0	3
Government	0	3	0	3
Computers & IT	4	2	0	6
Marketing	1	0	0	1
General trading & financial companies	1	1	0	2
education & training	0	1	0	1
Manufacturing	1	1	0	2
Total	23	14	0	37

10.4 : Implication of Lack Knowledge Management Initiatives

Not having formal knowledge management (KM) initiatives could result in Delayed organization growth (86.5 % of the sample answered this) this was followed by, Downsizing, Sub-optimal decision making, Expertise inaccessible, Information inaccessible or information obsolete, internal communication breakdown, External communication breakdown, Employee left company, Breach of copyrights & secret trademark (see table 8).

Table 8: Implication of Lack knowledge Management Initiatives

implication of knowledge management	% of sample	Rank
Delayed organization growth	86.5%	1
Downsizing	81%	2
Sub-optimal decision making	81%	3
Expertise inaccessible	62.2%	4
Information inaccessible or information obsolete	59.5%	5
Internal communication breakdown	54%	6
External communication breakdown	53%	7
Employee left company	40.5%	8
Breach of copyrights & secret trademark	35.1%	9

10.5 Barriers of Implementing Knowledge Management

Amongst the barriers faced by the organization surveyed, in implementing knowledge management initiatives were difficulties in motivating employee to share knowledge (89.2 %) then followed by Difficulty in identifying KM related roles & responsibilities of employee, obsolete data, the ability of existing IT system, Level of technology within company, The culture effect, Information & data overload (see table 9).

Table 9: Barriers of implementing knowledge management

Barriers of implementing knowledge management	% of sample	Rank
Difficulties in motivating employee to share knowledge	89.2%	1
Difficulty in identifying KM related roles & responsibilities of employee	86.5%	2
Obsolete data	81.1%	3
The ability of existing IT system	62.2%	4
Level of technology within company	54.1%	5
The culture effect	48.6%	6
Information & data overload	40.5%	7

11. Conclusion

Organization making the investment in knowledge management can realize huge bottom-line benefits. Those who prefer not to link knowledge and strategy do suffer tremendous cost in terms of lost revenues, customers and markets.

About 29.36% of the organizations surveyed in Jordan were reporting that they already established formal knowledge management initiatives in their respective organizations. This was evident amongst organizations in the Mobile and communication, insurance and banking sector. Nonetheless, the findings also showed that education & training and manufacturing sector were slowly catching up to meet the challenges of the competitive business environment.

The KM approach could be considered as relatively new in the Jordanian organizations and companies context as most of the organization were at the initial phases of formal KM (Investigation, review, preparing).

There are some people who are in charge of steering KM in their organizations. Some organizations are steered by BOD, others by IT people,…etc. In addition to that, IT, research and training are mainly the sources of KM initiatives in organizations. Managers recognize the result of Lack knowledge management initiatives and the barriers of implementing knowledge management in their organizations. Both results of formality of KM initiatives and KM implementation phases are evidence that knowledge implementation as a strategic initiative within Jordanian organizations is not well considered. Regardless this result, managers in Jordanian organizations begins to understand the importance of KM to their performance and productivity. The fully understanding of KM as strategic solutions to many obstacles needs more time, reasonable expenses and cultural change.

This study makes significant contributions to knowledge management research and practice in Jordan. These contributions relate to its importance as a nation-wide general organisational study and providing an originality exploratory approach in the field of business studies where concepts and implementation are still vague to many researchers and professionals.

In addition to academic outcomes, this research has contributed in a practical way. Managers and decision makers in Jordan can realize that Jordan organizations have not yet considered KM as strategic solutions for many obstacles. They must set new strategies and frameworks to develop their organization based on knowledge economy. Therefore, organizations sustain an acceptable competition level for their industries, as well as achieve acceptable performance. This can be achieved by accumulating capital, technology, manpower and experience. However, when organisations intend to increase their knowledge management capability, they should use their own qualified specialists before they get outside assistance.

The current study used a cross-sectional design, and it would be valuable to conduct a longitudinal study to see whether or not the variables are consistent over time. It is probably important to investigate KM initiatives in the context of different industries. The current comparative research is limited to some industry types, with the domination of some industries on others. A wide variety of reasonable equal organizations in each surveyed industries would improve the generalisability of the research findings. Finally, it is so valuable if this exploratory study done in other Arab countries. By doing that, a comparative study can be done or a wide perspective of KM initiatives in the Arab world can be figured.

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