Understanding the Impact of Knowledge Management on Driving Organizational Excellence towards Organizational Learning and Innovation

Mohamed Buheji, Itqan Management Consultancy, Bahrain

Abstract

This empirical study investigates the impact of Knowledge Management (KM) on the creation of Organizational Excellence (OE), Organizational Learning (OL) and Organizational Innovation (OI) – with specific application to Government Organizations (GO's). This study comes to fill the gap in the knowledge community in understanding the type of practical KM Models suitable for GO's. The study investigates the relationship between KM impact through KM maturity and Organizational Excellence as per suggested conceptual framework that leads to reflections of Organizational learning and innovation. Quantitative methods are used where data are collected from respondents from more than 60 Governmental Organizations. This study should help in having more structured coherent approach to support Harrington and Voehl's (2006) critical tools for creating organizational excellence and Drucker's (1993) understanding of most meaningful resources in a knowledge society.

Keywords: Knowledge Management, Knowledge Management Impact, KM Maturity, Organizational Excellence, Organizational Learning, Organizational Innovation.

Objectives of Study

This study investigates the extent to which KM impact leads to OE, OL, OI consequently which addresses the relationship between knowledge management impact and knowledge maturity that leads to advancing the organizational status. Specifically, it examines the effects of KM related practices such as better understanding of human capital, organizational culture, organizational infrastructure, management support, rewards, and vision clarity on performance improvement in organizations in the context of governmental organization. The researcher seeks to achieve these objectives by answering the following questions.

1) What is the impact of knowledge management on organization to start delivering organizational excellence, learning and innovation practices?

2) What is the relationship between knowledge management impact and KM maturity?

3) What is KM impact when the maturity of the organization as its highest?

Literature Review

What is Knowledge?

It is worthwhile to review what knowledge is before we further discuss on the KM impact. Knowledge is seen an object to be stored and manipulated or as a process of applying expertise or as a condition of having access to information or as a capability to influence action Alavi and Leidner (2001). Hence, knowledge is information effective in action, information focused on results. These results are seen outside the person in society and economy, or in the advancement of knowledge itself as per (Drucker, 1993). Hence, knowledge is an organization's key resource towards intelligence, decision making, forecasting, designing, planning, diagnosing, analyzing, evaluating, and/ or pushing the organization towards an effective decision making, based on collective facts that reflect a status (Tiwana, 2000).

What is Knowledge Management (KM)?

As we discussed earlier, knowledge must be effectively managed because it is recognized as an organization's most valuable resource (Holsapple & Joshi, 1999). KM also as per (Davenport & Prusak, 2000) is seen as a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. Therefore, if an organization is to be competitive in the modern economy, knowledge management (KM) must be a core competency (Davenport & Prusak, 2000). The general area of knowledge management has attracted an enormous amount of attention in recent years. Managing knowledge produces value when shared, used and reused. Consistent value occurs only when there is enough organization environment of trust and motivation for people to share and use knowledge, when there are systematic processes to find and create knowledge that would lead to KM impact. KM can be a part of systematic approaches to achieve organizational objectives. As emphasized by Alavi and Leidner (1999) and Davenport et al (1998) there is a need for systematic organizational specific framework to capture, acquire, organize, and communicate both tacit and explicit knowledge of employees so that other employees may utilize them to be more effective and productive in their work and maximize the organization's knowledge.

What is Knowledge Management Impact ?

Knowledge as a construct seems to be an invisible entity and at the same time it drives the bottom line of an organization (Pascarella, 1997). The value and impact of knowledge itself is increased when it has a key purpose and focuses on mission, core values and strategic priorities. Knowledge assets, like money or equipment, exist and are worth cultivating only in the context of the strategy used to apply them (Stewart, 2001). While the value of knowledge management is increased by its ability in determining what information an organization has that could benefit others and then devising ways to making it easily available to all concerned. And due to such increase in this type of knowledge intensity to the individual goods and services, and the growing importance of those goods and services in the economy, knowledge management have appeared to have a clear impact on fields as information technology, innovation management, strategic management and organizational learning (Noon and Blyton 2002). The importance of KM impact from Human Capital point of view is seen more in knowledge-based organizations where most of the services and products would be built around the ideas, knowledge and experiences that are taken from many sources – including people, other organizations, printed documents and electronic media.

Role of KM as a driving force towards creating Organizational Excellence that leads to Organizational Learning and Innovation

Bogner and Bansal (2007) see sustained organization performance to be related to the development of capabilities through effective management program that would create high impact or incremental impact using existing, internally developed knowledge as an input to build subsequent new knowledge that lead to inventions, or in process we call it innovation. Since Grant (1996), many researchers till date also confirm the concept where organizations that build their competence on their own knowledge, rather than on knowledge

acquired externally, are seen to experience above-average growth and profitability. Njuguna (2009) Wang et al (2009). Hence, knowledge can be created or shared when it is managed through its complex capabilities. The first of these capabilities, creating new knowledge, captures an ongoing series of learning activities wherein the new knowledge developed from each learning event is a rare input for future learning (Prahalad and Hamel, 1990). (Nonaka, 1994) believe that if KM represented by knowledge sharing get the chance of transforming and exploiting the new knowledge throughout the organization, eventually would get the habit of converting and incorporating value-creating resources into the operating routines. Building a creative and learning organization is also seen by certain authors as a pre-requisite for business excellence (Evans & Lindsay , 1999).

What are the mechanisms of KM driving force?

Bogner and Bansal (2007) see three components to KM as a system that would influence or drive an organization performance. These three components are an organization's ability to produce new knowledge, its ability to build on that knowledge, and its effectiveness in capturing a high proportion of the subsequent spin-offs. In this research, we focus on the organization's growth rate that is positively associated with its ability to generate rare and valuable knowledge, and to build on that knowledge in a way that would lead to more learning and knowledge in developing a organization's resource base (Porter, 1998); (Grant, 1996).

Effective KM programs start with targeting the ability to develop rare and valuable knowledge through learning, and to subsequently build upon, and spread, that rare knowledge throughout the organization (Cong and Pandya (2003) and Nonaka (1994)). This is seen to provide gradual maturity benefits, as per Cong & Pandya (2003) , for improving organization's performance through increased efficiency, productivity, quality, and innovation by having greater access to the organization employees knowledge. Also, with time, i.e. with more KM maturity; better decisions, streamlined processes, reduced re-work, increased innovation and collaboration. If we apply this to public sector, managing knowledge could reduce the cost of operations and improves customer service. As knowledge transfer is increased, it would be more recognized as a source of value creation. Also, with time organizations would identify KM initiatives as strategic facilitators of competitive believed long back that knowledge creating activities can result in innovation and key to survival. Goh (2002) and Prusak (1997). De Geus (1999) understood the link between features of successful growth and longevity in business in innovative companies and utilization of human capital by the concept of team work where a higher capacity to learn gives the organization competitive advantage.

Goh (2002) considers that the type of knowledge is the key factor that would facilitate success of K-transfer or K-sharing which here we use alternatively. Spender (1996) argued for a knowledge-based view of the organization, suggesting that knowledge generation and transfer capabilities lie at the 'core of a more epistemologically sound theory of the organization. Zaim et al (2007) found that KM infrastructure significantly affects KM performance which increase the effectiveness, efficiency and adaptability. Holsapple and Joshi (2000) discussed how KM impact culture and leadership with others as technology, organizational adjustments. Migdadi (2005) mentioned

that the interest in KM has grown because of the belief that creation and transfer of knowledge is essential to long-term organizational effectiveness (Alavi & Leidner, 2001). Boumarafi & Jabnoun (2008) and earlier Yahya & Goh (2001) have tried to define knowledge and its relation to excellence performance.

Driving Organizational Excellence towards Organizational Learning and Innovation (in GO context).

Several authors have tried to reveal the peculiarities and correlations between the Organizational Excellence approach and KM. However, there is a lack of systematic attempts to link both philosophies of management as emphasized recently by Castila and Ruiz (2008). Davenport & Prusak (1998) believed that the organization's critical success factors in today situation needs speed, management of complexity, a sense of history and context, effective judgement, organizational flexibility are all related to and dependent upon organizational knowledge. Organizational Excellence is being driven by the accelerated rate of change in today's organizations and in society as a whole. Alavi (2000) refers to the importance of KM in harnessing of organization intellectual capital as other movements have started (i.e. Movement of TQM, expert systems, business processes re-engineering, learning organization, core competencies and strategy focus). Grover and Davenport (2001) supported by Alavi and Leidner (2001) in seeing that OE can help organization to develop problem solving, dynamic learning and innovation.

In Government Organizations, this is no exception. Waddell and Stewart (2008) show that presently KM has a significant impact on an organization's quality systems which lead citizens to be more demanding and hence creating more demand for innovation. Today, governments are reformed in order to enhance public participation, to expand political opportunities, and to improve its operations as well as the quality of services provided. In UNPAN (2007) Workshop on Government Innovation, case studies where discussed on how governments started to feel the difference between knowledge economy, where knowledge is a product, compared to knowledge-based economy, where knowledge is a tool. In a previously published research done by the researcher, it was illustrated that "Excellence" knowledge-based economy is not a goal or a destination, it is a status of continuous striving for being the best and first in the workplace wherever and whenever possible that would create a positive perception on the customers/ citizens being served (Al-Hasan et al (2004)). For Waddell and Stewart (2008); Quality Management is the beneficiary of successful knowledge management implementation. Al-Hasan et al (2004) demonstrated that OE impact greatly on GO's leading to a proactive quality culture.

Recently, Byosiere and Luethge (2008) found that knowledge based on experience impacts the conversion of tacit knowledge within an organization, leading to innovative knowledge which affect the intangible assets of the organization to enhance organizational performance (Public Service of Commission of Canada).

Development of the Proposed Framework

Understanding the Anatomy of OE, OL, and OI

Many authors support the fact that there is still a need for a better understanding of the prerequisites of successful KM programs and the relationships within KM, whether this

relationship is between K-enablers and process, or relationships between K-enablers and organizational performance and relationships among K-enablers, processes and organizational performance. Khalifa and Liu (2003) , Lee and Choi (2003).

Once established in culture, KM would start spreading OE practices. Such practices would emphasize transparency, integrity, mutual confidence and participation. The identification with the organization has to be strengthened by sharing its mission, vision, values and strategy. Lim et al (1999) also tried to understand the KM relationship on effective quality strategy which starts with KM being able to reduce the loss of intellectual capital from employees who leave; then reduction of cost of development of new products/services; and then the increase in productivity of workers by making knowledge accessible to all employees which ultimately leads to increase in employee satisfaction. KM also would lead to a joint production, in which innovation is one kind of output and the learning and skill enhancement in the process is another. Innovation would start also as part of the process of interactive learning in which those involved increase their competence through engaging in such process. Nonaka (1991), Davenport (1998), Fedor et al (2003), Carpenter and Rudge (2003), Al-Alawi et al (2007).

McDermott (2001) emphasized that a visible connection between sharing of knowledge with practical business goals would reflect on organization practices and support widely held core values. While Rhodes (2008) sees that a structured learning strategy would come after knowledge transfer and is followed by an innovative organizational culture. Rhodes (2008) sees that the effectiveness of organizational knowledge transfer is influenced by key organizational factors such as structure, culture, processes and strategy, and information technology which triggers the move within our proposed anatomy structure.

Role of KM Maturity on the intensity of KM impact

One can't fully understand the KM Impact without fully understanding the detailed KM Impact on the anatomy of the organization at different stages of the organizational maturity in KM practices. This also needs to be illustrated in the proposed framework. KM maturity started when authors thought seriously about the importance of knowledge as an important asset that needs to be monitored at different stages. Also, KM Maturity is related to many previous work related to KM vs. Cultural Barriers. For example, Rivera-Vazquez et al (2009) see that cultural barriers can be overcome through better communication and K-sharing which leads to better environment for Organizational Innovation (OI).

The basic level of KM maturity starts with where Liebowitz and Chen (2003) argue that most people seem reluctant to share knowledge because they “keep knowledge close to heart as they move through ranks by the knowledge is power paradigm”. Then, the level grows step by step as reported by Al-Athari and Zairi (2001) from knowledge construction, to knowledge embodiment, to knowledge dissemination and then the knowledge use and benefits start to deliver. KM maturity matrix also improved with successful implementation of KM practices and with more organizations able to perform intelligently to sustain their competitive advantage (Wiig, 2000). Also, Tangible (Explicit) or Intangible (Tacit) assets were utilized in KM Cycle Development or creation of a better KM Maturity status. (Boumarafi and Jabnoun (2008)).

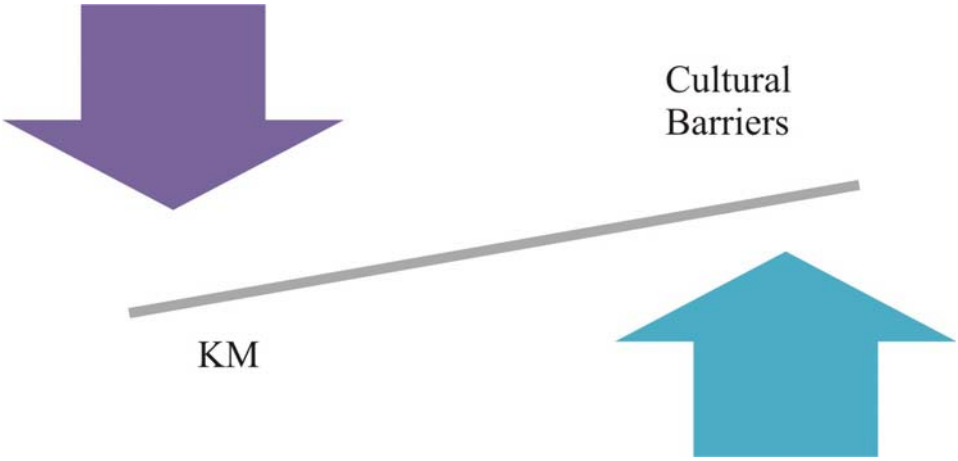

Figure (1) Representing the relation between KM Development in the Organization and Cultural Barriers.

If we apply these stages to know how the maturity of KM can improve performance, we see that in the government for i.e. would be about having the ability (empowerment) to access and apply the right knowledge, at the right time and the right place. Here

we can link Lubit (2001) categorizes tacit knowledge into four categories which its accessibility would depend mainly on the maturity of the organization. Hence, we are talking about a maturity scale where knowledge can't be easily copied by other organizations (i.e. competitors from other countries governmental organizations) and thus they are able to create sustained competitive advantage in today's KE (Storey and Quintas 2001). i.e. The level of the organization KM Maturity determine the type of knowledge shared within the organization and hence determines its ability to succeed among its competitors.

Also , Szulanski (1996) clearly linked the speed at which knowledge is effectively transferred within an organization and its competitive ability to the KM Maturity level. KM at that stage would be beyond the explicit knowledge being only managed through manuals, databases, best practice guides, standards and procedures.

Another maturity stage is where Gamble and Blackwell (2001) discussed about the organization ability to create various means of capturing and storing knowledge which later can be measured. Both authors think that this practice is what differentiates case studies of good practice and innovation. There is also a stage where individuals create and share their knowledge effectively within their organization, where employees bring to an organization their prior education, experience, knowledge and skills, and add value to the organization in the same time. This is called a stage where the organization captures the knowledge within. This is where Liebowitz

and Chen (2003) sees that KM could nurture a knowledge capturing and sharing culture while possessing unique challenges. At this stage, we could see a K-capturing and K-sharing involves a "motivate and reward" system, overcoming typically hierarchical and bureaucratic organizations while marketing the importance of knowledge.

Choo (1998) sees that K-creation activities as another stage that enables organizations to develop new capabilities, design new products and services, enhancing existing offerings and improve organizational processes. Most important aspect of KM Maturity stage is when the organizational setting is having the ability of knowledge transfer to locations where it is needed it can be used , as mentioned by Alavi and Leidner (2001). According to Bloodgood and Salisbury (2001) at this stage this should lead to advantage through speedier deployment of knowledge to portions of the organizations that can benefit most by it. This should help in a sound organizational performance as per Lahti et al (2002). McDermott (2001) emphasized that there is a stage where human networks are one of the key vehicles to trigger further sharing of knowledge. Figure (2) represents the proposed relation as per literature review between KM Impact and KM Maturity.

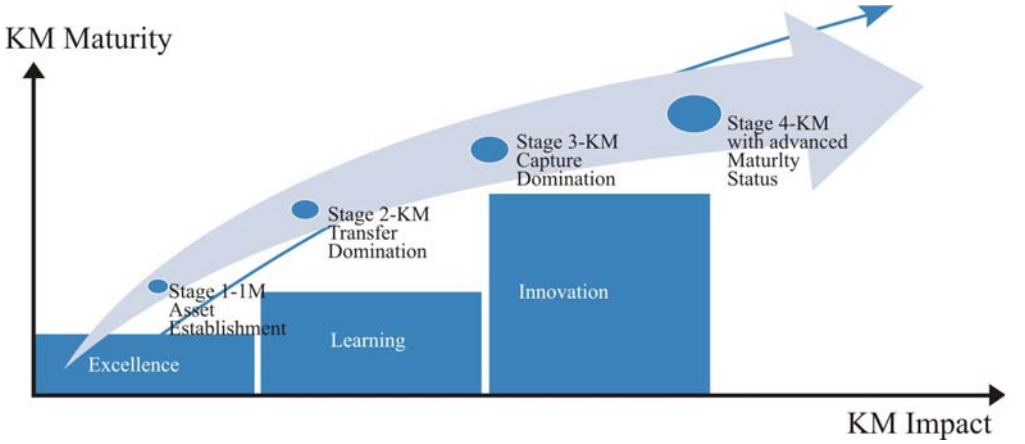

Figure (2) representing relation of KM Impact vs. KM Maturity stages as seen from literature review.

Proposed KM Impact-Maturity leading to OE-OL-OI

Hence, we come up with the following proposed model (Figure 1) where KM maturity would be an intervening variable that would lead to KM impact (the independent variable) to influence OE, OL, OI (the dependent variables). The model claims that the more is the maturity of the KM Maturity the more is the impact. Also, it claims that KM Impact (represented by different constructs as K-Assets, K-Transfer, K-Capture) can play a strong role in creating organizational practices that is of OE, OL, OI. These relations would be tested as per figure (3).

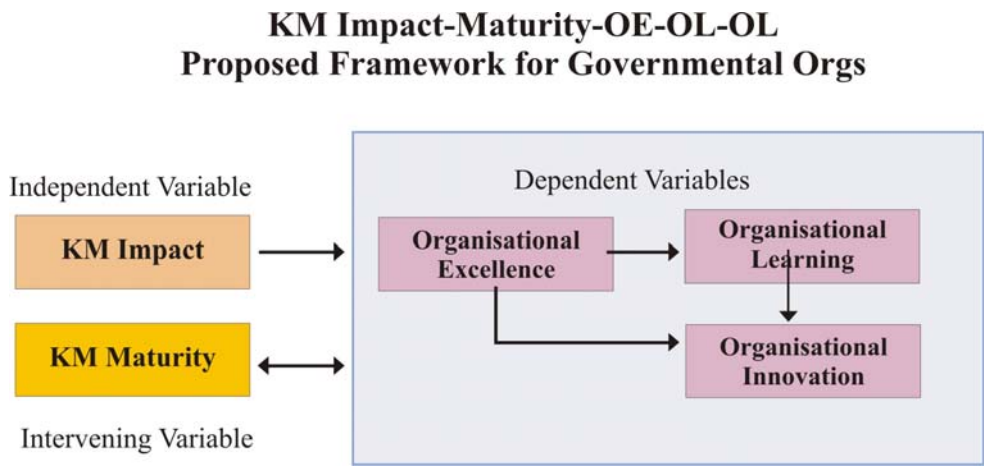

Figure (3) representing the proposed Framework that link all the 5 variables (KM Impact – KM Maturity – OE, OL, OI) and their relation that would be tested.

Research Methodology

Sample Selection

The research paper is specifically focusing on the decision makers in GOs which can influence the development of KM Strategy. The quantitative method was chosen since it proposes to measure and analyze dependent and independent variables within the proposed model. According to the positivism which supports empirical research since all phenomena can be reduced to empirical indicators that represent truth. This fact is due to the existence of one truth and is independent of human perception. Therefore, quantitative research methods work with data in numerical form collected from a representative sample and analyzed usually through statistical methods. The ultimate objective is to identify the dependent and independent variables, eliminating inadequate variables. Data should be collected from the executives of GO provider through survey which is self-administered.

The Survey Method

The survey questionnaire was devised drawing on an extensive literature review and series of questionnaires designed from well established paper on the same subject. (Boumarafi & Jabnoun (2008), Al-Alawi et al (2007), Zaim et al (2007), Syed-Ikhsan and Rowland (2004a)).

Alreck and Settle (1985) defined the survey as the primary data collection based on communication with a sample of individuals. The questionnaire was designed for self-completion by managers in an email-based or class-room based survey. The survey targeted GO managers and department heads involved in Bahrain Excellence Program activities. The organizations invited to participate are from different cultural background and with

different service specialties. The main tool for results analysis was Statistical Package for Social Sciences (SPSS), which is one of the most widely used, comprehensive and flexible statistical programs.

Selecting the attitudinal scale

The researcher was under the choice of using either open ended or closed ended questions, but since we wanted more of precise description of attitude that reflects the respondents perception; closed ended questions were mainly chosen. The researcher was very particular that the statements of the different aspects are reflective of the main RQ's; i.e. reflecting the measuring of KM impact towards the specified dependent variables. Participants were asked to indicate their agreement with statements in the questionnaire using the five-point Likert scale ranging from 1 for 'strongly disagree' to 5 for 'strongly agree.'

Data Analysis

Measures of KM Maturity as an intervening variable towards OE, OL, OI found that:

1- KM Policies and Practices in KE which represent the KM Maturity is strongly correlated (0.77) with KM Impact Enablers (K-Assets, K-Capture, K-Transfer/K-Sharing).

2- KM Maturity (represented by cultural change) also strongly correlated (0.707) with KM impact. This is supported by Ikhsan and Rowland (2004).

3- Also, we find that the more KM Maturity (represented by proper KM Policies and practices), the more is the interventional effect of KM Maturity.

Through Pearson correlation, we have determined the correlation between the dimensions of knowledge management impact in creating excellence culture that leads to learning and innovation. Also, a one sample T-Test analysis, with a test value of 3, was conducted to measure the use of knowledge management and to determine the extent to which the dimensions of knowledge management participate in creating an organizational excellence leading to learning and innovation in GOs. As per Table (1) and from dimensions 3 and 4 where KM Impact on OE is OL, OI constructs at its highest, this indicates that the most effect of KM maturity level to the highest impact of KM on organizational status is at these 2 levels.

Dimension	Alpha Coefficient
1-KM Policies and Practices in GO (Diagnosing stage of KM Maturity)	0.885
2-KM impact on creating OE , OL,, OI (representing basic stage of KM Maturity)	0.885
3-KM impact on creating OE , OL , OI (representing further stage of KM Maturity)	0.931
4-KM impact on creating OE , OL , OI(representing further stage of KM maturity)	0.919
5-Importance and effect of KM Impact on GO's Cultural Change (KM Impact leading to KM Maturity)	0.894

Table (1) Shows the Cronbach's alpha coefficient for all the tested dimensions to see the KM Maturity effect on the GO and KM Impact on creating OE, OL, OI.

As per Nunnaly (1978), 0.7 seems to be an acceptable reliability coefficient; hence since all the five dimensions are higher than 0.7 score, they seem to be very reliable and can be generalized. The following examples reflect that the more KM Maturity, the more OE, where the highest mean found to represent the KM impact/ KM Maturity on excellence culture :

If we draw the link between the highest constructs in each dimension, we would find that from the first dimension one can see that KM policies lead to effective communication which eventually leads to better OE, OL and OI. While in second dimension, results show that competitive GOs would have technology which map the location of knowledge (e.g., an individual, a specific system, a database), which eventually might lead to OE, OL and OI. In dimension three the effective (on time) K-capture leads to better organizational decision making, which eventually leads to better OE, OL and OI. The fourth dimension shows that experts in GOs are highly respected as a source of knowledge asset, which means at this stage of KM Maturity, we eventually would have a better environment of OE, OL and OI.. The fifth KM clearly improves work quality, which eventually leads to better OE, OL and OI..

Results

Organizations' demographics

The feedback and accepted questionnaires totalled 102 out of the targeted 170. The survey had a fare split of males (55.1%) against (41.5%) female participants in the survey. This approximately represents the total targeted population where the actual is 65 % males and 35% females. Most of the answers with the highest correlation came from the managers of age between 25-34 (33.9%) and between 46-50 (31.4%) which

reflects the type of Top and Upper Middle Management available with the targeted population. While the highest mean was in the area of 25-34 years of the targeted population. 10% of the respondents were from the Top Management of the GOs. The rest were the Upper Middle (29.7%) and Middle Management (28.8%) and (23.7%) respectively which gives strength to the survey, since it exactly reflects the targeted population.

Participants Representation as per Questionnaire

From the first question in the first section, we ensure the level of appreciation of the importance of KM impact in all types of organization services usually available with the government organizations. The Top and Upper Middle Management participated in the survey from 61 organizations and represented the following main services usually available in any government; i.e. Government Security; Government Information Systems and Networking Provider; Commerce and Industry Regulatory and Services; Citizens Life services providers (Education – Health – Housing – Electricity & Water), Country Infrastructure & Projects, Communication/Information/Culture; Judicial and Legislative Bodies; Diplomatic and International Affairs Bodies. This shows interesting variety where other analysis can be done to analyze the different KM Maturity and KM Impact can be seen in each sector, which is beyond the scope of this research. The majority (48.3%) of the participants work in the area of life necessity services (Education –Health-Security), compared to (8.5%) Innovative & Government Services Development. 12.7% of the respondents work in the area of Infrastructure related services and (7.6%) Government Rights Protection Services. This might reflect also the way that the questionnaire was distributed and the type of the service and impact on the choices made. More than (62 %) rated the Knowledge Management (KM) Practices affec/ impact on their organization as very high. The mean was below 2.5 (actually it was 1.6), with a good standard deviation of 0.68. Also, we can see a positive relation with a gradual increase in the participants choices along with the more maturity of the organization.

KM Maturity in relevance to KM Impact

In rating KM Maturity in relevance to KM Practices status the participants chosen the main challenge as being the scarcity of the information shared , which integrate with Al-Athari and Zairi (2001) findings. The participants seen having today a "Huge information" to be managed is not a main challenge. However , when asked about the challenges facing proper implementation of KM in their organization, about one fourth of respondents (25.4%) chosen the “Weakness of Knowledge Sharing Practices”. The mean was strong (3.5 out 5) with a standard deviation of (1.74). When asked as expertise in Management Culture what might be the challenges towards implementing KM, some of the extra answers chosen are: No Proper mechanism for K-Management, Huge

amount of information to handle, dynamic and rapid changes of information received by GOs, Lack of Abilities of converting raw data or information to useful knowledge, non-availability of specific budget or infrastructure. Figure (4).

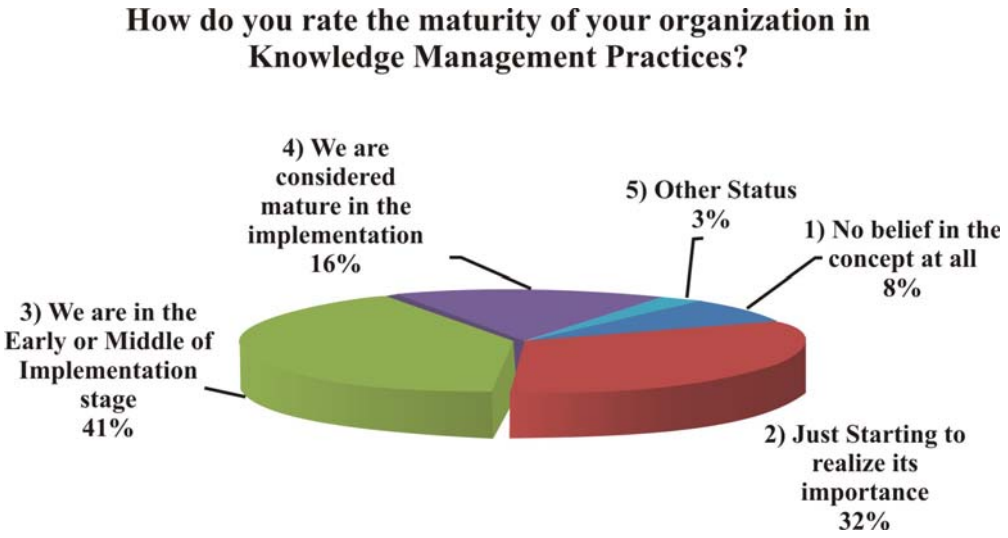

Figure (4) representing one of the graphs that represents the description of KM Maturity status compared to KM challenges.

When asked about the rate of the length of the current time needed to get knowledge related material, the highest percentage gone for having information being retrieved in hours. Even though the standard deviation is far from perfect, one can say also that no differences in the final choices are perceived throughout the questionnaire between those for whom time needed to retrieve knowledge (in minutes) and those (up to days). Clear difference is shown with those who have seen that knowledge needs (few weeks) to be retrieved. While the mean for timing towards retrieval of Knowledge is (2.6), the Standard Deviation is found to be(1.2). 19.5% of the participants were found to believe that knowledge can be retrieved in minutes, while (29.7%) believed that such knowledge can be retrieved in hours. Most strange is that (22.9%) believe that knowledge can be only retrieved in few days. However, up to (6.8%) of the participants believe that it takes few weeks before being able to retrieve knowledge. Two participants said it depends on the ease of access of information. From the above, we find that there is a fair understanding about KM importance among participants.

When asked what is the rate of the maturity of their organization in Knowledge Management Practices, most of the managers (40%) mentioned that they are in the Early or Middle of Implementation

Stage. While up to (32%) described the KM maturity as just starting to realize the importance of KM. To reflect the status of their KM Maturity, some participants gave specific feedback as an organization that has well established data based system, an organization that is able to learn better due to the type of applications. Other reflected that they need just more time to start KM applications. Some participants believe that KM strategy, i.e. part of the mechanisms of KM impact, need to be given more time to start the essential practice of K-Transfer. Interestingly, few participants (only 4.2%) found "no knowledge about KM best practices", which is another form of both KM maturity and impact, causes further delay in KM maturity deliverable. A few participants also see that time and maturity of the organization would lead to maturity in knowledge capture skills. One third of the respondents believe (with a standard deviation of 1.03) that their organization values are established based on knowledge sharing which means again that the more there is a KM maturity, the more KM impact. Also, another one third also believes that KM enhances the management of the job and enhances the utilization of its relevant knowledge. Different types of KM maturity of the organizations were tested about the challenges facing proper implementation of KM and consequently they are: Huge information to be managed, loss of tacit knowledge due to high employee turnover, a repetitive work or other slogan for other development projects.

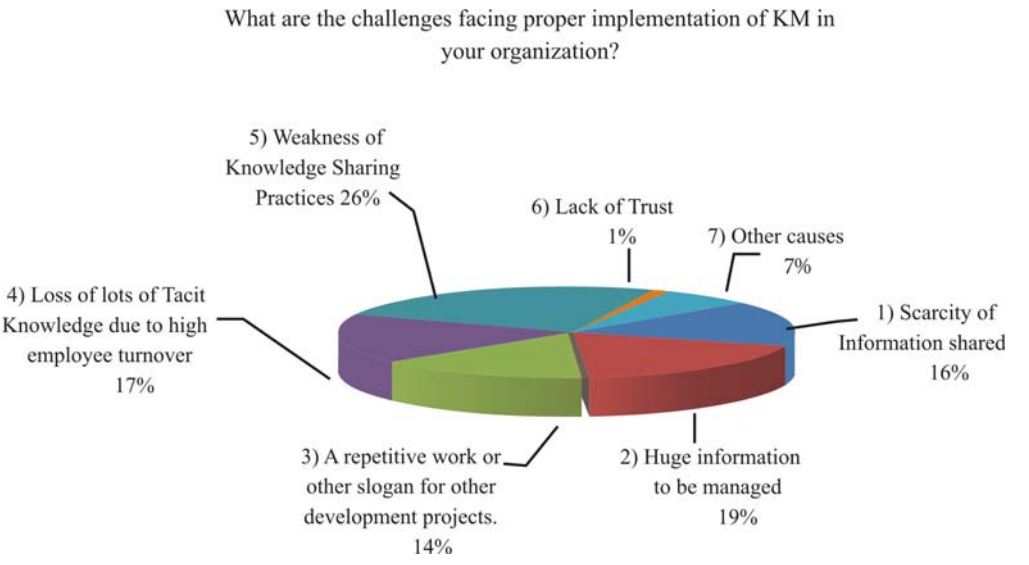

Figure (5) Represent the Maturity of KM vs. challenges facing proper implementation of KM

As reflected in figure (5), the KM maturity could be seen when rated the length of time related to knowledge retrieval. With a mean of (3.2) and standard deviation of (1.09), (32%) of the GO Management believed that "Strongly implemented KM Policies can improve service delivery". The mean was (3.1) when testing whether "KM Policies lead to flexible project structures", which many researchers believe that it leads to more ability to capture and implement KM.

KM Impact on OE , OL, OI

(33.9%) disagreed on having a list of all the K-Assets suitable for their organization which reflected that when there is a low maturity then there is a low KM impact on OE, OL, OI. While due to the maturity status of the GO being in fair middle stage (between stage 2 or 3) (28.0%) of the participants agreed with "We have specific K-Asset owners that ensure it is well utilized and updated". However, the mean was lower than acceptable.

Again (2.9). (36.4 %) took a neutral position on "The organization provides technology to map the location (e.g., an individual, a specific system, a database) of specific types of knowledge assets" with a good mean of (3.5). Figure (6) represents the link between KM maturity and culture.

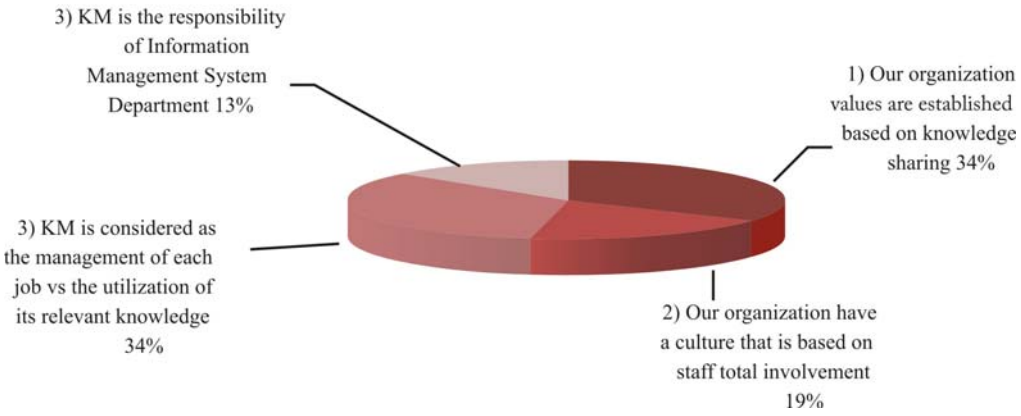

Figure (5) represents the cultural barriers and their relation with KM maturity that leads to stronger KM impact.

Up to (39.8%) of the participants agreed with "knowing what is the Market value of our Human Capital knowledge", with a mean of (3.6). And (33.9%) chose to be neutral when asked if they have evaluated the Tacit Knowledge of our Staff, with below acceptance level mean (2.7). While (33.1 %) disagreed in a mean of (2.8) to GO provides incentives for knowledge utilization. While regarding encouragement of K-Asset up to (41.5%) agreed, with a good mean of (3.3). The strongest statement seems to attracted the majority of the participants (50.0%) was on "We have specific types of K-Assets that we can utilize for competition", this came with a high mean also of (3.8). (29.7%) of the participants were neutral on "All our K-

assets are monitored & Updated frequently" with a low mean of (2.8). With below acceptable mean (2.7) ; (30.5%) of participants see that "Effective Knowledge Drain Risk Planning would lead to more competitive GO". While when asked whether they see that "Effective Knowledge Capture would lead to better organizational learning" with (3.1) mean up to (35.6%) agreed to that; this is important for OE, OL and OI. Up to (42.4%) of the participating GO Management Team took a neutral position for how they see that "Effective (on time) k-capture leads to better organizational decision making". This is a very important character for OE and OI. (31.4%) of the participants believed that "GO with capacity to learn from its achievements and failures have a better process management program" also here the mean was acceptable (3.2). This means that with more KM maturity this would reflect more OL and would lead to more OI. When asked how they see the importance of "Consistency of Knowledge Capture leads to learning organization", up to (34.7%) chose to be neutral with a mean (3.1). (39.8%) were also neutral in stating that "Human capital contributions in capturing knowledge" can be appreciated at the mean of (3.0). However, up to (41.7 %) strongly believed that "KM leads to process development" we can see here that the mean was as high as (3.2). This statement is mainly a confirmation of all the previous statements and it reflects what KM Impact flow would to OI.

Strangely up to (38.1%) were neutral in perceiving that GO should provide "incentives for knowledge utilization"; however, the mean again was not strong enough (2.8). (31.4%) continued to be neutral in choosing "No clear policies if GO does not have proper knowledge generation" with just barely satisfying mean (3.0). With a mean at (3.1) up to (32.2%) of the participants agreed to the construct of "Flexible structures enables the capture and implementation of KM". This means that the more the OE practices, the more KM maturity and KM impact. (41.5%) were neutral on statement that mentioned "Encouraging environment push for more K-capture" , with a mean of (3.1).

There was another dimension where we focused on measuring the impact of KM (represented by K-Transfer) or what is in some literature called (K-Sharing) in creating organizational status of OE , OL and OI. When participants were asked about their perception of creating an impact through having GOs Facilities need to be redesigned to enhance K-sharing and K-transfer, up to (28%) took neutral stand with below acceptable level mean of (2.8). While (35.6%) of the participants agreed with an acceptable mean of (3.2) that "GO Partnership Programs would be more competitive if it focuses on K-Sharing between the GO and its suppliers", KM impact would lead to OE. Also (35.6%) of the GO Managers took a neutral stand with a mean (3.3) that "GO Partnership Program focuses on K-Transfer between us and our suppliers". While (31.4%) of the participants came with a mean of (3.2) agreed to that "GO Leaders who share their knowledge through periodic business reviews would make a more competitive organization". (46.6%) of the participants also agreed with a mean of (3.5) in that "Experts in GOs are highly respected as a source of knowledge asset". This clearly shows the link between KM impact-maturity along with OE and OL. (39%) of the GO managers took a neutral stand with a mean of (3.2) towards "GO whom would

provide a good IT communication network would be more competitive".

While for the statement in testing whether "Ability of learning for GOs that have technology that allows employees to search and retrieve stored knowledge is higher than those who don't" , up to (37.3 %) took a neutral stand with the mean at the acceptable level of (3.3). (35.6 %) of the participants also chosen to be neutral with a mean of (2.8) for "Learning GO's would provide more incentives to knowledge Contributors". (40.7%) of participants chosen to be also neutral, with a low mean of (2.7) to "Competitive GOs would have clear mechanism for Knowledge sharing".

The majority (35.6%) among the 102 respondents either agree or a neutral in that "GOs have defined specific role regarding KM". This is reflected by having a mean of (3.3), while standard deviation is (0.98). Also the majority (36.4%) agree that "leaders should be transparent about K-sharing", this would lead to more effective communication within the organization as per also Al-Alawi et al (2007). Hence, the more KM maturity leads more to KM Impact and hence more OE, OL and higher possibility of OI. This was supported later where up to (40.1 %) believed that KM clearly improves work quality, with a very high mean (3.9). While when asked about their opinions about whether "GO should allocate specific budget for K-Development", up to (34.7%) agreed, however, the mean was not strong enough (2.8); i.e. below the test value of 3. In testing whether "K-Transfer leads to more effective Society Partnership Programs" in a mean of (3.4); up to (38.1%) again believed so. There was, as expected, an equal split of (33.1%) for being neutral or agreeing with the statement that "With time most GO Managers are going to appreciate that knowledge is not power, KM is power" with an acceptable mean of 3.2 and good standard deviation.

40.7% were neutral towards "The organization rewards knowledge creation" with a mean of (3.2). As high as (39%) of the GO Managers were found to disagree that "Amount of K-capture or K-Transferred is being measured with", however, the mean was below the accepted level at (2.4). When asked about the status perceived on "Employees are rewarded according to KM Practices", again up to (36%) were found to disagree with a low mean (2.7). A good and clear feedback with high agreement came from the participants on "Employees are encouraged to use others' knowledge to solve daily work problems". Also, this cross-checked with the same statement got high agreement on "Employees are encouraged to use others knowledge to solve daily work problems". The mean was also below the acceptable level with neutral choice at (2.9) on the statement construct of "we have established a no blame culture policy, so that employees are encouraged to exchange knowledge and ideas openly", with up to (30.5%) of participants. While we have another clear neutral stand with "Our Top Management is aware about the importance of knowledge management in knowledge economy", with a mean of (3.4) and being the choice of (39.8%). Also, up to (32.2%) found to be neutral in "KM improves customer satisfaction" with a mean of (3.6). Also up to (39.8%) in "KM improves organizational decision making" with a mean of (3.4). While up to (31.4%) on the statement of "KM clearly improves work quality" with a good mean of (3.9). The majority (37.3 %) of the participants

were found to believe and agree that "All GO plans are based on the data and information retrieved from its knowledge sources", with a mean of (3.2). This coincides with Syed-Ikhsan and Rowland (2004) where KM is seen as a source of competitive advantage.

Discussion & Conclusion

This study investigated the impact of knowledge management in coincidence with knowledge management maturity and if it leads to Organizational Excellence, Learning and Innovation. The survey also addressed the need for enhancing the KM maturity in order to enhance KM impact. We specifically investigated the practices of KM, or KM enablers that contribute to creating an impact on Organizational Excellence which leads Organizational Learning and innovation. All the top and upper middle managers agreed about the importance of KM enablers in creating an impact that leads to better organizational status. All questionnaires that reflected the symptoms of OE, OL, and OI have reflected the clarity of those interested in seeing better KM Maturity and KM Impact.

These results need more analysis with more specific surveys that focus the linkage of OE, OL and OI. The results of correlation analysis show significant relationship between KM Impact and OE, OL and OI. The author believes that the KM maturity status, being at either at early or medium stage have attributed to the neutral results. There is possibility that some of the responses were inaccurate as authors did it as part of the excellence program in the context of study. However, this finding shows that the there are different perceptions of Management Team within the context of governmental sector having clear understanding of how KM maturity and KM impact might to better organizational status; i.e. OE, OL, and OI. Further research is recommended to explore the generalization of this research into other industries, taking into consideration this early published work's relevance to have a comprehensive look on the work of KM impact on KM Maturity. Also, it would be interesting to see how this mechanism actually works within the organizational body.

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