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**Could Knowledge Management provide an  
organization with a competitive advantage?**

Ahmed Taher

Assistant Professor of Marketing

School of Business, Economics, and Communication

The American University in Cairo

Dina Ismail El-Kayaly

Performance Management Consultant

Ministry of Health

Arab Republic of Egypt

## ABSTRACT

Knowledge management is often falsely regarded as synonymous with information management. Knowledge Management (KM) is actually formalizing the management of an enterprise's intellectual assets. Designing a Knowledge Management System should ascertain the alignment of business performance outcomes with continuously changing dynamics in a business environment.

In such an environment, could KM provide organizations with a competitive edge? What factors could affect that competitive advantage?

This article focuses on three factors. The authors believe that those factors highly affect the organization's competitive advantage, and set to investigate their impact:

Factor 1: *The rate at which organizations learn*, which Senge (1990) considers as the only sustainable source of competitive advantage.

Factor 2: *Knowledge content and its relation to business value and customer value*, which is considered as an ultimate competitive edge

Factor 3: *Information Technology & Information Systems choices* that affect the competitive edge.

This article is divided into four sections. Section one includes, the basic definitions and the characteristics of the organizations that can benefit from KM initiative. While section two focus on the difference between learning organization and organization learning and their relation to strategy, section three elaborates the role of information technology and information systems in transferring knowledge. Section four emphasizes effective knowledge management and the related paradigm shifts concomitant with the new world order. This article will add to the literature on KM by designing an instrument that affords a more definitive assessment of compliance with KM initiative. Thus we can more accurately understand the constraints for an effective KM deployment.

**Keywords:** Knowledge Management Systems; Constraints of Knowledge Management; Knowledge Creation; Information Processing; Transformation of Knowledge; Business Value; Knowledge Management Failure; Business Model; Innovation.

## I. INTRODUCTION

Often knowledge management is falsely regarded as synonymous with information management. However, knowledge management is more than the organizational efficiency. McDermott (1999) believes that “knowledge is a human act, and thinking is at the centre of knowledge creation”. McDermott also asserts that “by combining human and information systems, organizations can build a capacity for learning broader than learning of any of the individuals within it”. Zack argues that “when communicators share similar knowledge, background, and experience, they can more efficiently communicate knowledge via electronic mediated channels”.

Gartner (2002) defined knowledge management (KM) as "formalizing the management of an enterprise's intellectual assets." In other words, intellectual capital is locked inside the minds of the employees; an organization that can find an efficient way to mine, share and manage this intellectual capital will improve employee productivity, increase customer satisfaction and retention, and distinguish the organization among competitors.

Efficient utilization of the intellectual capital via a KM initiative is imperative for any successful support organization. The knowledge-powered Support (KPS) is composed of four elements: interaction management; resource management; and performance management and knowledge management. (Rajagopalan and Subramani, 2003)

KM practice was proven helpful in case of hard economic times as well as in times of rapid growth. When an organization contracts, intellectual capital might be lost. When business picks up quickly, it is hard to hire and train employee to meet the expectations customers have for performance. In such cases, knowledge management serves as a system that identifies, captures, organizes and disseminates business-critical knowledge to help enterprises to deal with economic fluctuations. (Tobin, 2003)

### **Characteristics of organizations that benefit from KM**

**Knowledge management is most critical in business organizations where consistent accurate answers are required in response to customer queries and interactions. Typically, these organizations possess some know-how in the structure and systems they develop to deliver complex product-service offerings. This complexity usually entails intense interactions for problem solving and customer care, which in turn requires some level of formalization of the rules of interfacing with the customer. Customer-contact employees**

are therefore required to follow standard operating procedures (SOP) written in manuals and instated through training using a “master apprentice model”. It has also become a common practice to compliment such operations with customer relationship management (CRM) systems through sophisticated call-centers. Tracking the satisfaction of customers throughout the system has become the key ongoing measure of success and the barometer for customer loyalty and ultimately for long term profitability.

*Could KM provide organizations with a competitive edge? What factors could affect the competitive advantage?*

## **II. LEARNING ORGANIZATION**

### **What is organizational learning?**

Argyris (1977) defines organizational learning as the process of "detection and correction of errors." Huber (1991) considers four constructs that are linked to organizational learning: knowledge acquisition, information distribution, information interpretation, and organizational memory. He clarifies that learning need not be conscious nor intentional, does not always increase the learner's effectiveness, nor changes his behaviour.

Weick (1991) argues that "perhaps organizations are not built to learn." Further arguments suggested that, organizational learning perhaps involves a different kind of learning than has been described in the past: "the process within the organization by which knowledge about action-outcome relationships and the effect of the environment on these relationships is developed" (Duncan & Weiss, 1979).

In summary, individual learning occurs when people give a different response to the same stimulus, but organizational learning occurs when groups of people give the same response to different stimuli. (Malhotra, 1996)

### **What is a learning organization?**

Senge (1990) defines the learning organization as "a group of people continually enhancing their capacity to create what they want to create." While Malhotra (1996) defined it as an "organization with an ingrained philosophy for anticipating, reacting and responding to change, complexity and uncertainty." Also, McGill et al. (1992) define it as "a company that can respond to new information by altering the very ‘programming’ by which information is processed and evaluated."

*Proposition 1: A ( the only) sustainable source of competitive advantage is the rate at which organizations learn. (Senge 1990)*

### **Organizational learning vrs. Learning organization**

Ang & Joseph (1996) distinguish between organizational learning and learning organization in terms of process versus structure. While McGill et al. (1992) define organizational learning as "the ability of an organization to gain insight and understanding from experience through experimentation, observation, analysis, and a willingness to examine both successes and failures". His focus was on learning from actual experience instead of playing different pre-designed scenarios.

### **The relationship between strategy and organizational learning**

Mintzberg (1987) insisted that the key is in fostering strategic thinking rather than getting the right strategy. Strategists within an organization should foster learning rather than devising plans and engage the managers in finding the implications of possible scenarios, preparing them for uncertainties in the task environment (Malhotra, 1996).

Medtronic, Inc., is a leading medical technology company famous for achieving outstanding business results through innovative learning culture. Through creatively managing its internal and external relationships, Medtronic has reduced development cycle times for new medical devices from four years to 18 months. And 70 percent of revenues come from products launched in the previous two years.

In learning organizations, managers learn from their experiences rather than being bound by their past experiences. Management practices should encourage, recognize, and reward: openness, systemic thinking, creativity, a sense of efficacy, and empathy.

### **III. ROLE OF INFORMATION SYSTEMS (IS) / INFORMATION TECHNOLOGY (IT)**

Huber (1991) specified the role of IS as the memory within the learning organization. But IS can be used for knowledge acquisition as a market research and competitive intelligence system. (Malhotra, 1996)

Seven-eleven Japan is the most profitable convenience store franchiser in Japan. This company takes full advantages of information technologies, such as point of sales (POS) system. However, good IT practices alone are not enough to ensure proper knowledge management; human experience along with tacit knowledge play key roles. (Fijii, 2003)

### **Does IT/IS impose any constraints on organizational learning?**

Huber (1991) noted that more learning occurs when varied interpretations have been developed, because such development changes the range of the organization's probable behaviours. But, most information systems focus on the convergence of interpretation.

He insists that an organization may be said to learn to the extent that it identifies and corrects error. The technology of Management Information Systems (MIS), quality control systems, and audits of the quality control systems is designed for single loop learning. Meaning that the programs are designed to identify and correct errors, jobs get done, and the action stays aligned with the organization policies. The trouble arises when the technology is not effective and the system is a double loop, correcting errors is not the answer. (Malhotra, 1996)

### **From Information Processing to Knowledge Creation**

The information-processing view of an information system has major problems. Since it's based on over simplified assumptions about storing past knowledge of individuals (as routinized programmable logic, rules-of-thumb and archived best practices), for guiding future action. These problems are:

***Problem 1:*** KM technologies can deliver the right information to the right person at the right time.

The new business model is characterized by radical changes. It's impossible to build a system that predicts who the right person at the right time even is.

***Problem 2:*** KM technologies can store human intelligence and experience.

Technologies such as databases and data warehouses applications store bits of data, but they can't store the rich schemas that people possess for rationalizing

the data. Moreover, the same assemblage of data can evoke different responses from different people. So, storing a static representation of the explicit representation of a person's knowledge is not equivalent to storing human intelligence and experience.

John Seely Brown, director of Xerox Parc noticed that despite investments of over \$1 trillion in technology over two decades, U.S. industry had realized little improvement in the efficiency and effectiveness of its knowledge workers. Confusion knowledge with information caused managers to sink billions of dollars in information technology investments that yielded insignificant results. (Malhotra, 2000)

**Problem 3:** KM technologies can distribute human intelligence.

This assumes that companies can predict the right information to distribute and the right people to distribute it to. (Malhotra, 2000)

### **Knowledge as an ultimate competitive advantage**

Knowledge can be considered as the ultimate competitive advantage only if it was understood from an action-oriented perspective, which is achieved by translating information and decisions into actionable value propositions.

Then knowledge lies in action: in effective utilisation of data and information resources for actionable decisions and, most importantly, in execution. Managers need to define and maintain their business value propositions, and deploy this knowledge management strategy aided with information, communication and collaboration technologies. (Rajagopalan and Subramani, 2003)

An example of modern knowledge management is found in the Zara Corporation, a chain of 937 retail stores located in 31 countries. Zara competes in large malls throughout Europe and Asia. Unlike other fashion retailers, Zara uses an accelerated fashion schedule to take a trend from "catwalk to store shelf" in as little as two weeks. GAP takes about a year to do the same. Zara uses a knowledge management system to achieve its rapid time to market cycle time. (Bollinger and Smith, 2001)

## Successful Knowledge Management determinants

Managers are demanding better justification for investments in knowledge management systems (KMS) infrastructures and expected better business performance outcomes. Business environments characterized by rapid and radical change direct KMS to be based on ongoing innovation of business value propositions and extended inter-enterprise value networks.

This would prevent the failure of KMS due to the gaps between the value these organizations create and the value demanded by changing market conditions, consumer preferences, competitive offerings, changing business models, and, industry structures.

## Challenges for KM systems not to fail

- Knowledge management systems are usually defined in terms of inputs (data, IT, best practices, etc.), that by themselves are inadequate to result in business performance. Intervening and moderating variables such as attention, motivation, commitment, creativity, and innovation, has to be included in business models design.
- The effectiveness of inputs and how they are strategically deployed are important issues often left unquestioned, but the value of the performance outcomes may be affected by the dynamic shifts in the business and competitive environments.

These constraints are presented in the following discussion as challenges that need to be faced to cause a successful knowledge management. (Malhotra. 2002)

Challenges	Description
<b>Challenge 1:</b> <i>Business and Technology Strategy</i>	Organizations need to develop adaptive capacity for redefining their business value propositions, and to redesign their business processes for realizing more interesting (read profitable) customer value propositions, while harvesting the knowledge rooted in the existing setup. KMS need to be flexible, adaptive, and scalable systems that could accommodate real time changes in information and data across the business ecosystems network.
<b>Challenge 2:</b> <i>Organizational Control</i>	In an ever changing environment the organization should continuously assess the assumptions underlying the business logic. And assure that the definition of business performance outcomes is aligned with the changing market conditions, consumer preferences, competitive offerings, business models, and, industry structures.

	<p>Traditional business logic is based on control; the new business environment requires a business model that assumes existence of few rules, some specific information and a lot of freedom. Integration of data and processes in intra-sectoral form will impose challenges to organizational control.</p>
<p><b>Challenge 3:</b> <i>Information Sharing Culture</i></p>	<p>KMS success depends upon integration of not only data and processes but also decision-making and actions across the entire organization. Effectiveness of integrated information flows depends in turn upon the accuracy of shared information. The challenge results from the potentially competitive nature of various organizations, in terms of access to privileged information, that may determine the dominant position in the organization value networks. Likewise, access to customer and supplier data residing in databases or networks that are hosted by external providers, that needs to be safeguarded from third parties, may pose increased privacy and security challenges.</p>
<p><b>Challenge 4:</b> <i>Knowledge Representation</i></p>	<p>KMS flexibility depends upon its capability of sensing composite change patterns in business environments and then using that information for adapting the digitized logic and databases, aiming to guide decision-making, actions, and consequently leads performance outcomes.</p> <p>Artificial Intelligence and expert systems based KMS can deliver the right information to the right person at the right time, by enabling complex computation of specific and clearly defined domain expertise areas by compiling inferential logic derived from multiple domain experts. The challenge is that storing explicit static representations of individuals' tacit knowledge in technology databases and computer algorithms is not a valid surrogate for their dynamic sense making capabilities.</p>
<p><b>Challenge 5:</b> <i>Organization Structure</i></p>	<p>It is necessary to design technological systems that are sensitive to the dynamic and divergent interpretations of information necessary for navigating radical changes in business environment. Subjecting the existing business logic to critique from customer, supplier, and partner perspectives helps in redefining innovative customer and business value propositions. Managers must distinguish between the lack of structure and lack of controls.</p>
<p><b>Challenge 6:</b> <i>Managerial Command and Control</i></p>	<p>A key challenge for managers is fostering commitment of knowledge workers to the organizational vision. As it becomes difficult to specify long-term goals and objectives, such commitment would facilitate real-time strategizing in accord with the organizational vision. Knowledge workers would need to take autonomous roles of self-leadership and self-regulation as they would be best positioned to sense the dynamic changes in their immediate business environment. Managers would need to facilitate the confidence of knowledge workers in acting on incomplete information, trusting their own judgments, and taking decisive actions for capturing increasingly shorter windows of opportunity. In the new world of business, the control over employees will be ultimately self-imposed. Allow innovation based on various kinds of knowledge. (Tobin, 2003)</p>

<p><b>Challenge 7:</b></p> <p><b>Economic Returns</b></p>	<p>Brian Arthur (1994) argued that "the production, and distribution of knowledge-based goods and services should create and sustain increasing returns in contrast to diminishing returns that are characteristic of the industrial goods and services".</p> <p>KMS would need to demonstrate how organization information architectures could facilitate relationship-building capabilities. This will enable sharing of accurate, complete, and timely information by stakeholders to achieve true integration of information flows.</p> <p>A related issue is the design of incentives for knowledge sharing that must consider that institutional controls, monetary rewards and incentives are not necessary and do not guarantee the desired knowledge sharing behavior. Managers need to settle measures such as punitive contracts with the need for trust and loyalty of customers, employees, partners, and suppliers (Malhotra, 2002)</p>
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***Proposition 2: Knowledge content and its relation to business value / customer value is considered as an ultimate competitive edge.***

### **Knowledge Transfer: Adapting Knowledge Management practices**

Knowledge sharing has to go beyond the simple reuse of objects in different applications to other stages in the process development life cycle, as in the following form:

- *Learning Before Doing:* Using scenario planning, personnel/expertise matrices and organization-wide expertise directories to encourage knowledge sharing. Organizations can also use project planning using simulation models, repositories from prior projects, directories of domain expertise, directory of test cases, style guides and feature tables.
- *Learning While Doing:* Using simulation tools, ongoing meeting and event archival, and refinement of indexing schemes to support learning mechanisms. Software houses provide tools to support collaborative thinking and exchange of ideas, index design solutions for easy retrieval, and archive problems encountered and solutions implemented.
- *Learning After Doing:* Using after-action reviews, creation of skill packs, book shelving of projects, lessons-learned, compilations and incentive systems to motivate learning at this stage, benchmarking analysis of projects, organized storing of projects in a repository and post project analysis (Rajagopalan Subramani, 2003)

During 90's, Nokia took great risk by sending young inexperienced employees all over the world with assignments to create new markets by opening up long-term customer relationship. They took responsibilities and learned to make decision on the spot. Simultaneously, senior managers traveled all over the world to solve problem with customer facing employees. Mutual intensive problem-solving by front-line employees and senior managers, unified their tacit thoughts. Nokia learned to trust front-line people, intuition, and rapid decision making. Such practices from Nokia, created a culture that accepts failure and saw it as a learning opportunity.

This case illustrates the opportunities for individuals to learn and gain experience that eventually accelerates individual and organizational tacit knowledge, and unifying values and ideals. (Fujii, 2003)

### **Prerequisite of enhancing knowledge creation and transfer**

Pfeffer & Sutton (1999) clarified the knowing-doing gap and said that “Knowledge of how to enhance performance is not readily or easily transferred across ... (and) within firms”. He suggested eight guidelines for action:

1. Understand the underlying philosophy first. Managers jump into how, instead of knowing why that happens.
2. Encourage a master apprentice model. Things regarding organizations, operations, and people, can only be learned by actual experience.
3. Creates opportunities for learning by doing.
4. Culture of forgiveness is important. Allow experimentation.
5. Trust managers and give them some space. Pressure and fear often make managers do irregular and inconsistent things.
6. Encourage team work. Unproductive internal competition drives people to be reluctant to learn from each other or to share their knowledge with internal competitors.
7. Measure the processes so that process improvement is possible.
8. Walk the talk. Leaders configure environments, and help set expectations through their actions and not their words.

Bollinger (2001) points out that “most of the barriers to effective knowledge management involves people”, in other words culture. Trust and respect are necessary, as are authenticities, loyalty, and caring. There must be cohesion across the

organizational structure and culture, people, processes, and technology (Quintas et al., 1997). All these elements together can help the organization build synergy (Miller, 1998, Fujii 2003).

Grayson and O'Dell (1999) support the value of knowledge-sharing culture. They even defined six things to do in order to change the culture into knowledge-sharing one: "believe in people; prepare to lead by doing; rely on the twin forces of capitalism and democracy; develop collaborative relationships; install personal responsibility for knowledge creation and sharing; and create a collective sense of purpose". Beside that, technological and structural capabilities should not be ignored.

By linking information and communication systems in an organization, fragmented flows of information and knowledge can be integrated (Teece 1998).

Finally, to summarize this section, Mårtensson's research (2000) of critical elements for successful creation and implementation of knowledge management strategy is illustrated. These elements are what she found through massive literature review; the "so-what" question; Support from top management; Communication; Creativity; Culture and people; Sharing knowledge; Incentives; Time; and Evaluation. (Gadman , 2000)

A flourishing knowledge management program requires the active participation of all employees throughout an organization. They must contribute and seek information in order to accomplish their group's mission. In the private sector, sharing can be encouraged and rewarded financially. Public organizations, which operate with limited resources, seldom have this option. Yet the knowledge that civil employees hold becomes truly useful only when diffused to citizens and agencies at the federal, state and local levels, as well as governmental partners.

#### IV. TOWARD EFFECTIVE KNOWLEDGE MANAGEMENT

Consider these questions: How to capture, store and transfer knowledge? How to ensure that knowledge workers share knowledge?

It is imperative for organizations to clearly understand the above strategic distinction between knowledge and information. This strategic difference has critical implications for managing and surviving in an economy of information overload. It seems logical to account for human attention, innovation and creativity needed for renewal of archived knowledge, creation of new knowledge and innovative applications of knowledge in new products and services that build market share. (Malhotra, 2000)

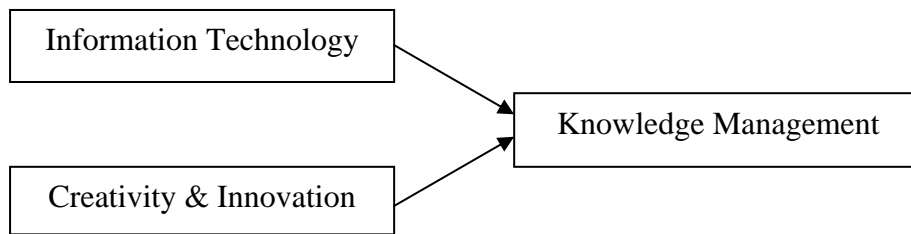
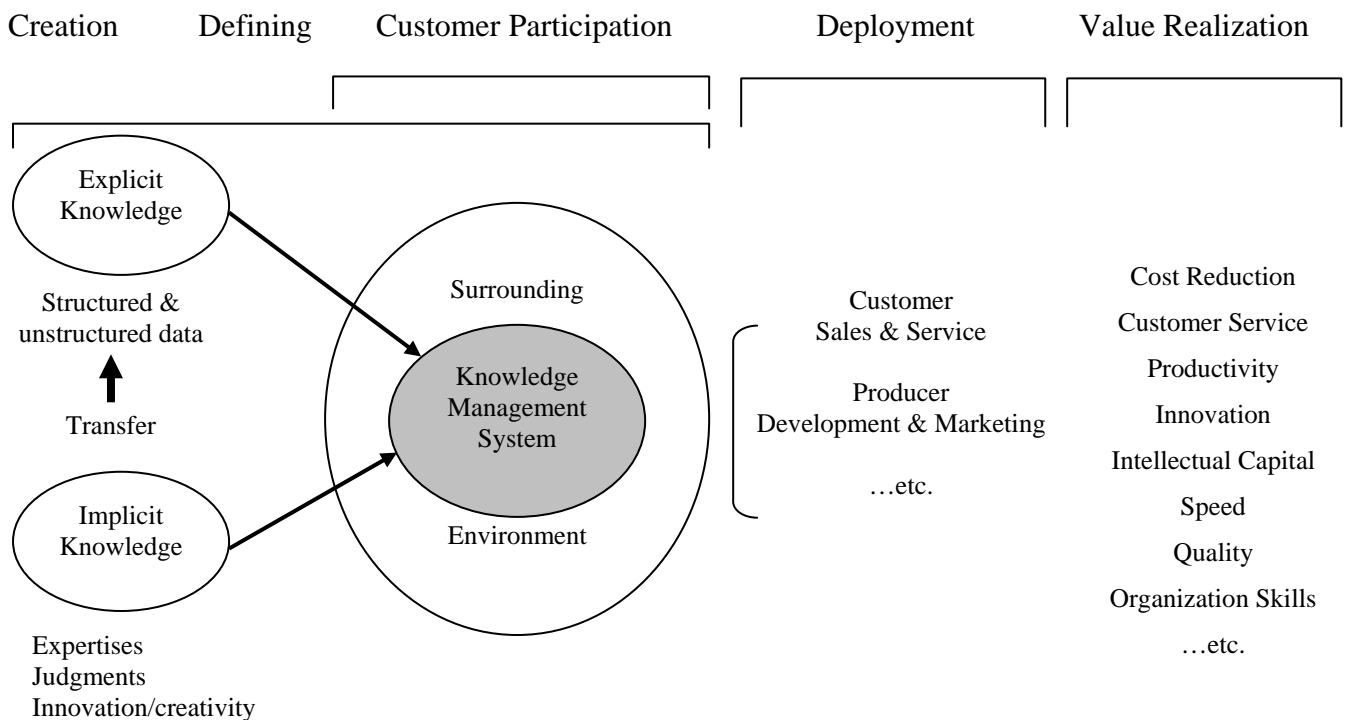


Figure 1. Elements of effective Knowledge Management

#### Knowledge Management in the new world of business: Customer Value

Organizations are set out to succeed, in terms of net profit. KM deals with the value of work in terms of productivity, innovation and customer delighters, as expressed in figure 2.

Figure 2. Knowledge Management in the new world business



Today's business world does not reward playing by pre-defined rules but rewards understanding and adapting to the changing rules of the game, as the game itself keeps changing. Figure 3, represents the difference between the traditional business and the new world business according to selected domains.

Domains	Traditional Business	New world Business
<b>Strategy</b> <b>Technology</b> <b>Management</b> <b>Knowledge</b> <b>Assets</b> <b>Organizations</b> <b>Regulations &amp; practices</b> <b>Models</b>	Predictive Convergence Compliance Utilization Tangibles Structure Compliance Mostly Static	Anticipation Divergence Self-control Creation & Renewal Intangibles Turmoil Diversified Interpretations Dynamic

Figure 3. Difference between traditional & new world business

Related to the strategic notion of knowledge and knowledge management, there are some fundamental shifts known as *paradigm shifts* characterizing the transformation from the old world of business to the new world of business.( Malhotra, 2000)

- *Paradigm Shift in Business Strategy*

The implications of this paradigm shift are in terms of a faster cycle of knowledge-creation and its application, by allowing continuous and rapid detection and correction of any discrepancies between the 'theory of business' and the changing business environment. Access to organizational information base, authority to act, and the necessary skills are embedded at the frontlines.

- *Paradigm Shift in Design and Use of Technology*

The implications of this paradigm shift are in terms of the shift from the traditional emphasis on transaction processing, integrated logistics, and work flows to systems that support competencies for communication building, people networks, and on-the-job learning.

- *Paradigm Shift in Management*

The implications of this paradigm shift are in terms of change of the role of the senior management, from command and control to sense and respond. The emphasis should

be on building commitment to organizational vision rather than compliance to rules and pre-specified best practices. Emphasis on multiple and diverse interpretations of information also helps in development of a large range of responses needed for deciphering the complexity inherent in dynamic changes of the business environment.

- *Paradigm Shift in Organizational Knowledge Processes*

The implications of this paradigm shift are in terms of deployment of best practices by embedding them via information technologies to facilitate efficient handling of routine and predictable situations. Effective knowledge management in a rapid changing environment may need ingenious suggestions more than it does concrete, documented answers.

- *Paradigm Shift in Economics of Organizational Assets*

The implications of this paradigm shift are in terms of the impact of traditional factors of production that became limited by the scale of economy and its impact on investment. Information assets and knowledge capital seem to be governed by a different law of economic returns: investment in additional unit of information, knowledge creation & utilization, and network infrastructure, results in a higher return.

- *Paradigm Shift in Organization Design*

The implications of this paradigm shift are in terms of facilitation of the organization's self-designing. Organization's members should define problems for themselves and generate their own solutions, also evaluate and revise their solution-generating processes. Encouraging experimentation and rethinking, promotes knowledge creation.

- *Paradigm Shift in Regulation & Practices*

The implications of this paradigm shift are in terms of limited control. The new business environment assumes few rules, and a lot of freedom.

- *Paradigm Shift in Business Models*

The implications of this paradigm shift are in terms of business modeling. Static model that are devoted to document work and data flows are no longer valid. The new

business environment requires dynamic models that allow and measure interaction between various dependent, independent and moderating variables. (Malhotra. 2000)

***Proposition 3: Information Technology & Information System used, affect the competitive edge.***

**Assessing the compliance with the Knowledge Measurement initiative**

We can add insight into effective knowledge management practice by considering variables that have not been previously investigated. By designing a more definitive assessment of compliance with KM initiative we can more accurately understand the constraints for an effective KM deployment.

Knowledge Management Assessment Tool (KMAT) was developed by the American Productivity & Quality Center and Arthur Andersen in 1995, to help organizations self-assess where their strengths and opportunities lie in managing knowledge. The tool is divided into 5 sections: the KM process; leadership; culture; technology; measurement. KPMG consulting agency on the other hand, has developed a framework assessment exercise in 2001, allows you to see graphically how well advanced your organisation is in Knowledge Management. The exercise is divided into 10 sections: awareness and commitment (7 questions), strategy (6 questions), culture (8 questions), external focus (5 questions), Incentives (5 questions), IT (5 questions), Maintenance & protection (6 questions), on going assessment (5 questions), organization (10 questions), and Using and Applying Knowledge (4 questions).

There is no perfect solution for designing a measurement tool to assess a KM initiative. It is necessary though, to construct a suitable tool to assess the organization's compliance with the KM initiative. This proposed tool will be based upon the domains illustrated in figure 3. Those domains collectively incorporate to KM either via Information technology utilization or through an environment of innovation and creativity as illustrated in figure 1.

Each domain will be given a relative weight depending on the organization line of business. Then every domain will be disaggregated in to few questions, answered using a scale (e.g. 5 point Likert scale). The domain score is then multiplied by its relative weight and the final score is then calculated.

The final score should be compared relatively to a predefined intervals which should vary across industry and culture. An uptrend of the final score should indicate a progress towards the sustainability of the KM initiative. This tool works also as a detector to the weak points requiring further attention.

The tool constructed could include the following domains:

- Strategy

Refers to the definition of business and customer value propositions and focuses on whether the organisation is committed to a KM improvement programme and how it is managed to ensure business benefit.

- Using technology

Refers to the level of IT sophistication available. This should have the *minimum weight* since it is only a tool that can not work without a deployment strategy. Focuses on whether the IT in place is sufficient and used effectively enough to support knowledge management.

- KM culture

Refers to the degree of IT utilization in every day work, with emphasize on the learning techniques and knowledge transferring mechanisms. Shows whether the behaviours within an organisation enables exploitations of knowledge inherent in the company in an effective manner. Does the organization know the best experts for different domains of key knowledge, and place mechanisms to codify their tacit knowledge into an explicit format?

- Management

Refers to the role of senior management, communication, and different interpretation of data. Shows whether staff members understand the concept of knowledge management and whether senior management are committed to its use. Also, whether the organisation properly rewards those that support its efforts towards knowledge management by incentives.

- Processes

Refers to the availability of systematic processes for gathering, organizing, exploiting and protecting key knowledge assets, from external and internal sources. Also, interested in organization's products or services promoted to the external market. Focuses on whether specific roles been identified and assigned, and are all senior managers and professionals trained in knowledge management techniques.

- Market Interface.

Refers to the company's market share and its influence. Focuses on whether an organisation is attempting to look beyond its own boundaries in order to maximise its business opportunities.

- On going Maintenance & Protection

Refers to how well the organisation protects and maintains its information and knowledge assets. Focuses on whether there is a strictly maintained knowledge inventory, with a knowledge tree, and clear ownership of knowledge entities, that is readily accessible across the organization. Also, focuses on whether the organisation measures the KM impact and particularly the management of intellectual assets has on the organisation.

## **CONCLUSION**

The new world witnessed the materialization of interest in knowledge management and its adoption by information technology vendors and solution providers. This fact triggered the need for developing better and more accurate understanding of knowledge management as enabler of information strategy for the new world.

Passing from the information-processing perspective to a new perspective deploying knowledge management, a need for synchronization between the capabilities of advanced information technologies and human creativity and innovation to realize results became highly demanded.

The article focused on three factors, that the researchers believed they highly affects the competitive advantage of an organization, summarized as follows:

Proposition 1: Senge said that the only sustainable source of competitive advantage is the rate at which organizations learn.

Proposition 2: Knowledge content and its relation to business value / customer value is considered as an ultimate competitive edge

Proposition 3: Information Technology & Information Systems used, affect the competitive edge.

Finally, this article proposed an evaluation tool to assess the organization's compliance with the KM initiative. This tool evaluate the performance towards an effective KM intuitive, it also scan the environment for improvement opportunities.

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