

## KNOWLEDGE MANAGEMENT – A DRIVING FORCE IN EXPLOITING BIG DATA TO ENHANCE ORGANIZATIONAL PERFORMANCE: AN OVERVIEW

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### ABSTRACT

*Knowledge is considered to be a strategic imperative of all the organizations to sustain, compete and excel in this competitive world. Today it is considered to be more powerful and valuable asset of organizations, though in a nascent but rapidly growing practice that is helping organizations to gain insights of their businesses. The increasing size of artifacts and business processes has resulted into emergence of Big Data. The quality, dynamic variation and diverse nature of information, challenges any organization to possess higher performance; hence, Knowledge management holds a very important role in managing multifaceted information and association to organizational performance improvement. The current literature focuses on the issues related to Knowledge Management of Big Data; structured and unstructured, and challenges faced by enterprises in performance improvement. The study will address the need identified and will focus on some of the Knowledge Management concerns in terms of organizational performance. Also this study is based on the concepts related to the idea that big data is actually big knowledge and knowledge management is valuable asset of organizations to enhance their performance.*

**Keywords:** *Knowledge Management, Big Data, Organizational Performance*

### INTRODUCTION

Data can be figures or facts that have no context and it can be composed from various devices such as televisions, smart phones and computers. Moreover, people can realize with all what are happening across the world within short period of time using one machine called television. Furthermore, if you have to generate your data of one day will be bigger than what will you capture of data for one year using Big Data. It involves different architecture, tools and techniques to be prepared for solving any such kind of issues that may face by the data.

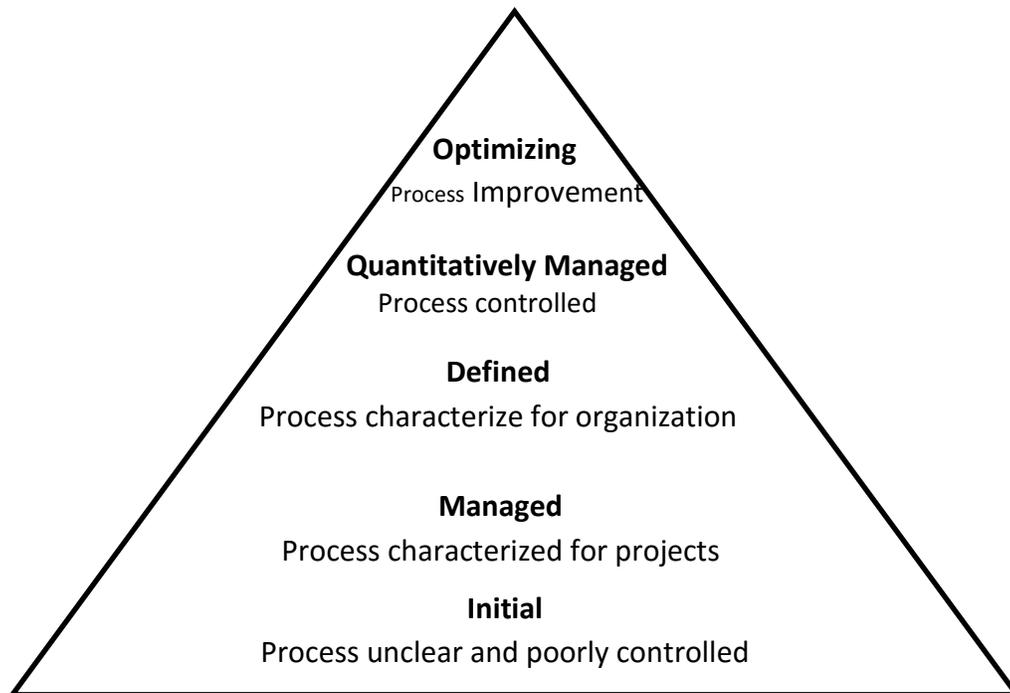
Knowledge Management (KM) is the systematic process of ways of creating, processing and presenting the information. Also, KM can be used to recognize the organization's

process, values and products based on its assets since knowledge has two types; tacit and explicit knowledge. Tacit knowledge is not available knowledge it is largely experience based and context dependent and personal in nature (Brown & Duguid 1998). Explicit knowledge is dignified and codified in files and documents that are easy to classify, store and retrieve (Wellman 2009). Business Intelligence (BI) is defined as the technologies that can be used in the process of transferring data to the information then to the knowledge. Hence, applying the knowledge can make profitable changes or results in the business actions to reach the customer's satisfaction.

To start successful business intelligence, it should follow seven steps as discussed. First - institute vision for the Business Intelligence; second - develop a BI roadmap; third - is to establish funding process and BI governance; fourth - launch BI capability center; fifth - to align business and information technology for long haul; sixth - amount the profits from the BI; and lastly only then you can trust the system.

### KM MODELS

For understanding the nature of knowledge creation became easy using SECI model used to manage the process actively by creating suitable needed process. It stands for socialization, externalization, combination and internalization. Second KM model is Capability maturity model (Figure: 1) which was developed for the software development as well as to engage the applications, software and activities to promote the organization from one level to another. Moreover the below diagram shows varied five evolutionary levels the organization was managed in.



**Figure: 1**  
Capability Maturity Model (Bonner, 2000)

Moreover, Business Intelligence is considered as other model of KM which is providing improved business decisions through using the management information system to succeed the data; it refers to the skills processes and technologies of understanding the business context furthermore it can be used for better decisions making in business to have profitable results. Business intelligence system; an example that the organization need to enhance the custom of data collection, provide appropriate ideas for new business initiatives also the company must publicize and study the customer needs and desires to attract the customers to compete their business with other organizations businesses over the world. Moreover BI contains the technologies used to assist large organizations to understand the superiority of applications used within the organizations.

The activities being done in the business context and its objectives' strategies involving both two parts of the business intelligence are internal and external context that can be used to identify the extent of the processes effectiveness; also to recognize whether the business is complied with the policies and met the planned objectives or not. Using key performance indicators by business intelligence model create the ability of having the business context analysis which is essential to be in strategic levels. From other side, business intelligence with the technological improvement and software tools can achieve the importance in today's world business. Moreover both types (tacit and explicit) of KM has particular role for decision making. Currently, a great number of organizations are practicing BI because they are planning to achieve a set of objectives and BI are supporting that such as reduce expenses, promote business and increase revenues. BI is effecting on KM in practical ways; since it provides extensive variety of features also branded critical success factors (CSFs) has been reported in, both, technologies KM and BI.

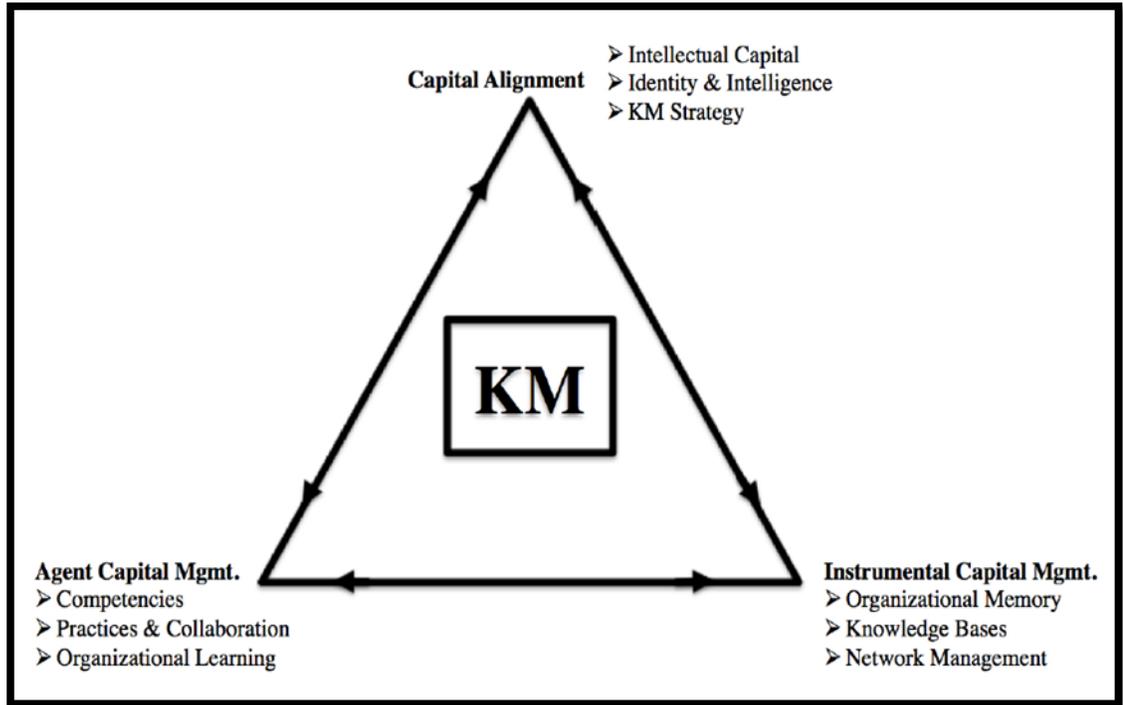
Moreover, the technologies of KM can be used to generate, recover and distribute both structured and unstructured information; as well as these technologies are useful to supporting processes and organizing documented information also to enhance the competence of searching to support solving any kind of issues.

### **KNOWLEDGE MANAGEMENT FRAMEWORKS**

Touching toward the new era, KM field has been related to ideas which were developed to help theories explosion, learning paths and case studies. For instance, in 1999-2000 Butterworth has issued his first Knowledge Management to contribute as strong house for new ideas (Cortada and Woods, 1999).

Furthermore, KM framework used to describe the elements and components that are effecting in global setting. Also, it identified the major parts while designing the processes of knowledge management systems, since it can be used to achieve the objective of the organization. On the other hand, it can guide all the improvement process through providing area for both solution and success factors those who are implementing the system and for decision makers to enhance the organization performance and meet the customers satisfaction. In addition, it can act as reference for the researchers to equate between researches in the KM field then to find out the solutions and success factors as well to have efficient performance reaching to the customer satisfaction As piercing out by Prusak (Sampler Call, 2014), those models occupied the lack or missing part occurred by both approaches and framework in the KM's field (Figure: 2). They were deterred by

advisors academics, and toughly permitted in publications and conferences. Prusak has noted that all what is happening from issues is not bad. “Even though there may not be much experiential indication for those methods, they can advise new ideas and beneficial conversations; discussing some method better than leaving a blank page or generate unrelated data.”



**Figure: 2**  
KM Core Processes (Tisen et al., 2006)

Deep understanding of the knowledge and expertise emanating from each other will help for rapid decision making in unprecedented period of time. How people learn from each other to enhance the organization’s performance by practicing the knowledge management also by collaboration and more effective organization. Furthermore, hundreds of organizations have installed a document sharing system thinking to implement the knowledge management practices; the approximate percentage of 25% for the technology and 75% percent for the processes of the organization so the knowledge management can be achieved for the entire organization.

The framework classifies seven types of capitals; innovation, material, relational, human, financial, intelligence and identity. Also, it improves a perceptual measure to realize the

degree to which a specific type of capital has been reached in clusters of villages or some particular village (Batra et al., 2013; Batra, 2007; 2012).

KCS (Knowledge Centered Support): It's defined as the framework of process of the knowledge management used to support the organization under pressure to produce high quality services and products. These services have high availability, easier for employees to access with fewer costs.

Pressure: The technologies are growing with availability, efficiency and accessibility and also the complexity; also, the difficulty for IT managers to source the suitable skills and knowledge to offer suitable help is hard. Because after procurement of these resources next is capturing the expert's knowledge, store it and then share it with all other staff for enhancing better the organizational performance.

### **HOW KNOWLEDGE MANAGEMENT SUPPORT THE ORGANIZATION'S PERFORMANCE**

Globalization has brought multiple new trends that all the firms should adapt rapidly to keep alive in the competitive market. Today knowledge has become vital for individuals and organizations. Through having intellectual resources and realizing their big value, the firms have started to improve them. From this point, we can see the reputation of knowledge management concept of the organizational knowledge that is intended to operation and implementation of knowledge supporting diverse judgments. Furthermore, here, people have a vital part, intelligent resources, knowledge and residence in addition to the contribution like income influence or services and products.

In addition, the success of the organization depends on using strategic managerial tools during the process of producing the business or services. Those can be achieved by learning investment strategies and obtaining new knowledge in order to improve the existing performance and create new business.

The processes of KM purposes to sustenance inventions and inspire the stream of ideas over in the company; it benefits in profits aggregates (because the transformation of services and products to market will be faster) and decreasing costs (because it is discarding unnecessary business process and any further redundant practices). Those processes will increase with the period of time for employees to stay in the company because their experience and knowledge will be valued by particular system. Eventually, the process of knowledge management is used to increase the company's value and its attractiveness as a whole, because it uses to raise the efficiency and relationship among innovation and all the resources (Tisen et al., 2006, p. 47).

## KNOWLEDGE MANAGEMENT OF BIG DATA

As observed, big data became grown quickly, it involves three various characteristics namely:

- ❖ Variety: including generation of machine, social media and others.
- ❖ Volume: its increasing quickly since it repetition every 12 months.
- ❖ Velocity: sharing data through various applications in smart phones like Facebook and Twitter.

Information is raw or numbers of structured words or data processed that have context and meaning it doesn't involve people but it requires technologies that are, primarily, information technologies. Also, knowledge considered is that managers or senior staff can draw inferences using the information based on their experience to help them in decision making to solve any expected problems leading to improvement in the organization's performance. For instance, if people decide to do online shopping for any kind of products first they will have a look for the products their names and prices which we can call them as data. Secondly, they will click on every product to see the details; uses quality and ingredients to get an idea about the product which we can call it as information. Lastly, people can think based on their experiences and take decision whether to buy the products or not here we can call it as knowledge; furthermore, informative and structured information processing using particular formulas.

Knowledge defined as the principles of all resources but it is neither structured nor implicit also it is involved in the action taken by the people to enhance the performance of the organization. Hence, the people can get the information through using various documents such as books and papers. By using the personal computers large amount of information will be processed.

The availability of knowledge management within the organizational business, it can provide multiple benefits and features for improving the performance of the organization as discussed below:

**Collaboration:** Knowledge management provides huge number of opportunities to permit the people to exchange knowledge both tacit and explicit. Because collaboration; all together carries the power of various experience and different thoughts to generate effective decision making for the organization leading to enhance the organizational behavior.

**Encourage and use learning:** simplifying and facilitating the learning through creation opportunities for groups and individuals to keep the knowledge ready for use; influencing the organizational knowledge through making the right information to the right people to solve any challenges facing by the organization.

**Foster social capital:** Over raising the transferring of individual knowledge to organization and foster across time, cost and boundaries of the organization. Furthermore, link people who have the necessary knowledge (tacit and explicit) with those who requisite it for accomplish their responsibilities and jobs.

**Attract and Retain Human Capital:** KM use to support in influencing what people know, know-how and know what since people are consider as primary asset. Also, it is critical to maintain the expertise within the organization. Hence, the knowledge can endorse the career growth.

**Create & Use Structural Capital:** through converting the intellectual capital to the strategic capital and start focusing on the budget and knowledge as well to achieve good quality business products and services.

## CONCLUSION WITH FUTURE RECOMMENDATIONS

Through strategic creativities, organizations and businesses from various sectors started to enhance serious intuitions from the structured and unstructured data captured via various initiative systems and investigated by relational database management systems that are profitable. However, there is a need to adopt proper knowledge Management Systems to gain more understanding and insights of business, which could be used as competitive advantage. Over the past two decades, big data management has become the foundation of Business Intelligence and Business Analytics, developed to enhance the performance of the organizations and companies to serve humanity around the world. Also there is an immense need to have a complete integrated framework to design and implement KMS as several different factors could have numerous effects on the performance of organizations. Literature revealed that knowledge Management applications have positive impact on the big enterprises and some misconceptions related to the adoption and effects of KM on Small to Medium enterprises may possibly be investigated empirically. Also study investigation is needed in relation to financial and non-financial; both types of performances shall be conducted in a challenging environment of developing nations.

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