

## Knowledge Management the Pillar for Innovation and Sustainability

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### Abstract

In this ever changing and challenging business landscape characterized by rapid and continuous technological advances the competitiveness and sustainability of any enterprise depends on knowledge management, efficiency, flexibility, innovativeness and timely response to changes to be in alignment with or superior to its rival in terms of time factor to significantly meet the market demands. The competitiveness of any enterprise depends on flexible and innovative management of its human resource –knowledge- as an ever appreciating asset which grows with time. In today's swift transformation to knowledge economy, knowledge management and empowerment is the most vital factor which determines the level of innovation that can be attained. The development and implementation of an effective knowledge management and empowerment system is the catalyst for hyper-growth within any organization with a vision for the long haul.

This is the case since there will be the effective utilization of the organization resources for creativity and innovation and increased absorptive capability by acquiring internal and external knowledge to continuously refreshing previously acquired skills. This article will scrutinize the importance of knowledge management as the most significant element for innovation and sustainability.

**Keywords:** Technological advances, Competitiveness and Sustainability, Knowledge Management, Empowerment, Creativity and Innovation, Absorptive Capability.

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## **1. Introduction**

In this unpredictable and ever changing business landscape knowledge management will continue to play a pivotal role in the business environment in their pursuit for sustainable innovation- the essentials for business survival. The complexity of the working environment and the need for creative and innovative ideas has increased the demands for knowledge management within organizations to bring about genuine and original creative value while organizations intensified their search for strategies for sustainable competitive edge. The most strategic resource today is knowledge. By realizing the major value of intellectual resources, companies have begun to manage rationally and improve them. Intellectual knowledge, act as a compliments and increase reputation, through the reduction of operating costs, create entry barriers for potential competitors, increased customer loyalty, and leads to increased innovation. The success of organizations largely depends on continuous investment in acquiring new knowledge that creates new legitimate businesses and improve existing performances.

Innovation can be considered as a web or network of ideas and knowledge that propagates positive changes in organization, competing in the market and meeting demands. If we want to achieve successful innovation, it is necessary to provide new combinations of basic production factors [1], as well as development of innovation knowledge-based abilities and application of an effective knowledge management system. Thus, the realization of the innovation process involves knowledge-based activities which are essential in creating capabilities for product development [2]. The complexity of innovations also requires organizations to increase the volume of knowledge, disseminate and democratize information which is the basis of their creation. Innovation initiatives tend to depend heavily on employees' knowledge, expertise, and commitment as key inputs in the value creation process [3]. The knowledge-based view depicts firms as repositories of knowledge and competencies [4, 5]. According to this view, prior studies recognize the knowledge and competencies of human resource as valuable assets for firms because of their characteristics of firm-specific, socially complex, and path-dependent [6, 7]. Human resource practices are the primary means by which firms can influence and shape the skills, attitudes, and behavior of individuals to do their work and thus achieve organizational goals [6]. Previous literatures have paid attentions to the link of HR practices and organizational outcomes such as productivity, flexibility, and financial performance [8, 9, 3, 10, 11, 12, 6] but the understanding needs to be extended to encompass innovation performance [13]. For innovation to take place, firms may leverage human capital to develop organizational expertise for creating new products and services. These deliberate practices entail individuals wanting to perform the tasks and making efforts to improve performance. Firms can identify and exert a set of strategic HR practices to elicit the willingness and motivation of employees to engage in performing these delicate practices to develop organizational expertise for business objectives such as innovation performance [14, 15]. Accordingly, strategic HR practices can be conducive to innovative activities because strategic HR practices may allow firms to discover and utilize knowledge and expertise in the organization [16]. Although a firm has access to the knowledge, skills and expertise of employees, it may need to possess good capacities in managing knowledge management tools in place to ensure effective utilization of the human capital in the development of organizational expertise for innovation.

## **2. Knowledge management the fundamental element for modern entities:**

In the light of global business landscape transformation, institutions are exposed to unpredictable, complex and sensitive environment. The unpredictable business landscape is ushered to global financial crisis, market liberalization, information democratization, modern and constantly evolution of technology, flexible management styles, partnership development and co-opetition. Companies, therefore in order to survive are compelled to be innovative and contemplate on modern strategies for improving image, service, products, reducing cost and responding to meet the ever demanding changes in customer demands. The changes in the business landscape, the shift from factory model to technological and knowledge economy has brought new insights, opportunities and tools that are used in strategizing business road maps. During the industrialization era institutions had created a value by the physical transformation of tangible assets into products. During the IT era we have seen and realized that the market values of properties have increases with greater participation of intangible (intellectual) resources in relation to tangible properties. In the period of the 80<sup>th</sup> years of the last century, the large number of companies' property (60 %) was tied to tangible property, and the rest was related to the intellectual resources ("intangible" property). Today, the situation has significantly reversed. The global trend has caused that the company' value is largely associated with the "intangible" assets (80 %). [17].

In developing knowledge economies intangible resource still remains a decisive element of business sustainability. Modern enterprises have been awakened by the sting of reality that all business processes and strategies are a process of knowledge acquired over a period of time and thus have recognized knowledge as the most strategic resource for competitive edge over competitors. Due to the reality that knowledge (intangible asset) is costly and sometimes can be a scarce resource, there is a need for institutions to manage it effectively and efficiently as a foundation to construct responsible and ethical responses to the market. Knowledge is a way for understanding all about information and data to actively enable performance, problem solving, decision making, teaching and learning of others [18]. In today's business arena the most successful companies are the ones with the ability to learn, create change, be flexible, creative, whilst dealing with complex and challenging new situations, utilizing emerging technologies, good communication skills, encapsulate critical thinking and problem solving, collaboration, leading by influence, agility and adaptability, entrepreneurialism, accessing and analyzing information. These factors mentioned above help the institution to identify and boost the transparency of intangible resource, to promote intellectual capital and corporate knowledge through professional growth and development through continuous learning especially through information and communication technology (ICT). The most golden (intangible) asset any institution can ever have is its employees, the skills and knowledge that they possess and the organizational culture directed at creativity and innovation. With continuous knowledge renewal and empowerment, it creates added value and long term profitability by the dissemination and transferring of knowledge within the internal entity.

### ***3. Knowledge management the key for innovation***

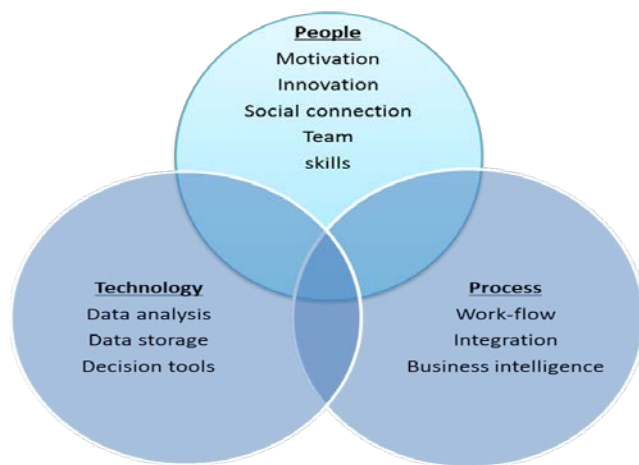
Currently with the inevitable growth and research in the field of innovation, knowledge management has become a key factor in developing organizational competitiveness, image and social responsibility. Knowledge management includes new knowledge construction, knowledge embodiment, knowledge dissemination and knowledge use [19]. [20] States that knowledge management is the process to critically manage knowledge to meet existing needs, to exploit existing knowledge and developing new opportunities. This terminology reflects that knowledge management holds the key for creativity and innovation. Knowledge management can accomplish a great deal of functions in the innovation process.

The premiere function is that knowledge management enables the cohesion of tacit knowledge. Tacit knowledge dissemination is critical for organization innovation capability [21]. Institutional success, creativity and innovation depend highly on exploring, critical thinking and analysis, use of latest technology and hands on doing. These attributes tend to create a mirage that makes it complicated for competitors to keep in pace with. According to [2], replication of knowledge-based competitive advantage is inhibited by two factors. Causal ambiguity leads to specific practices or inputs (e.g. knowledge) for replication being unknown.

Secondly, social complexity or unique firm history that produces the knowledge makes it difficult to replicate. Getting tacit knowledge from customers and suppliers is a valuable source for organizations' innovates on programs due to scarcity of such knowledge that can be used as input for innovation. The second role that knowledge management covers in innovation is through co-opetition (Collaboration). The concept of co-opetition was expanded upon by Adam Brandenburger and Barry Nalebuff, professors at the Harvard Business School and the Yale School of Management respectively in their book entitled "co-opetition" in 1996". This term placed forward the idea on cooperating and competing at the same time. This allows the customer, suppliers, employees and competitors to form a network of knowledge sharing within and outside of the organizational boundaries that work collectively to complete shared organizational goals thus leading to the success of all involved parties. Co-opetition amongst organization plays an especially significant role in transfer of tacit knowledge and building collective know-how. The stronger the relationship between collaboration partners, the greater the extent of the tacit knowledge transfer. Gathering tacit knowledge from co-opeting partners could potentially reduce risk and cost in innovation by ensuring a first-time-right approach, thus shortening development cycles and ensuring effective innovation. According to [24] there is often a high incentive for innovators to seek needed information and knowledge from professional colleagues through informal networks as valuable knowledge is often available only in tacit format and collaboration is a quick and efficient way to access knowledge. According to [24] and [16], collaborative experiences positively affect the capability of firms to recognize and understand mechanisms for knowledge gathering, interpretation and diffusion. Knowledge management can facilitate collaboration as mechanism to foster innovation through provision of technological platforms and tools to enable knowledge sharing within knowledge sharing communities, such as online discussion forums.

The third major role that knowledge management plays in the innovation process is assorting critical activities in knowledge management lifecycle, which of creating, gathering, sharing, and leveraging of knowledge. Knowledge management ensures the integration of and compatibility of knowledge in the organization defined structure and context, which is conducive to knowledge sharing and leveraging. According to [1] knowledge integration implies that timely insights can be made available to be drawn at the right juncture for sense making, i.e. knowledge can be exchanged, shared, evolved, refined and made available at the point of need. [25] Indicate that organizations use knowledge management activities and tools, such as environmental scanning, benchmarking, intranets, firm-wide databases and communities to acquire knowledge and to make it accessible.

The fourth major role that knowledge management plays in the innovation environment is through the creation of a culture conducive for knowledge creation and sharing as well as collaboration: Several researchers have emphasized the pivotal role of the management of knowledge, particularly in creating an internal working environment that supports creativity and fosters innovation [26]. [26] Have also concluded that there is a significant and positive relationship between knowledge management practices and innovation performance, and that organizations therefore should strive for an integrated approach towards knowledge management, which assists in building a corporate culture, in order to maximize innovation performance leading to competitive advantage. Knowledge creation, sharing and leverage build employee skills that are particularly relevant to the innovation process. Particular skills are required in specific innovation settings, and knowledge management can ensure that those individuals with the most appropriate skills sets are selected to assist in the innovation process. Knowledge management also contributes to creation of a culture conducive to innovation through the way that knowledge creation and sharing behavior is measured and rewarded:



**Figure 1. The component of knowledge management: people, process and technology (PPT)**

**People:** understanding an organization's culture (values, norms and morals) is significantly important to make knowledge management conducive because it is a human oriented issue and calls for critical thinking and collaboration. Human resource personnel's need to conduct in-depth analysis to ensure that's it organization support an ongoing learning and knowledge sharing platform. They also must ensure that its human resource base is motivated and compensated for disseminating and utilizing most current knowledge and creating a culture of openness for mutual respect and development. Human resource personnel need instill in their colleague that knowledge is power and so develop programs to encourage sharing by removing the constant pressure to act and take responsibility and time for the thirst for knowledge and development whilst at the same time inspiring its workforce to be creative and innovative and avoid the blame culture that may exist. All barriers that may hinder knowledge sharing should be eliminated and conduct an analysis to determine how best to develop an enabling environment for knowledge empowerment and sharing by adapting to new trend and business realities especially in this era technological development and social networking both internal and external..

**Process:** in terms of knowledge management process can best be explained as starting with a human base oriented trigger event that may create a chain of actions that may results in creating an environment for empowerment. Human resource personnel must being at a critical level by identifying key steps to guide the process from beginning to end while creeping into details to envelop and cater for the various pitfalls involved and various exceptions. Knowledge management managers may wish to develop a standardized process while at the same time incorporating flexibility to adapt to new realities during the process whilst keeping an open vision for avoiding significant drawbacks and possible failures.

**Technology:** one of the biggest fallacy is that knowledge management is mainly about technology- getting an intranet, linking by email, being cyber and technologically literate, being socially linked etc. HR managers need to cultivate in its people that technology is a vital enabler of knowledge management since it connect people with people and information and that it must be used to fit the organization people and process otherwise it is useless. Technology should be seen as a tool that can be employed for knowledge management for data collection, analysis, and taking decisive actions to further empower its HR resources thus developing a channel for innovation and business strategy for growth, development and competitiveness

These three components can be views as a tripod and if one leg is not present then it will fall to one side; however the one leg which is considered most important is people. The primary focus of any organization must be to focus on developing a conducive culture and knowledge friendly hub among its manpower which must be supported and an appreciative process enabled by technology for continuous overall development and empowerment.

#### **4. The potentials of knowledge management strategy**

Knowledge management strategy implementation must be seen as master plan which guide and determine the future of the organization success in innovation and creativity once it is employed effectively. A knowledge management strategy vital especially in this business landscape with constant changing customer behavior, market place uncertainty, increased product development complexity, competitors and technological shift and radical product life span. These indicators mentioned above will continue to force companies to innovate and diversify and improve with time to meet market demands and thus knowledge management strategy creates an enabling environment and tools which coordinates decisions and diversity making innovation a possibility. Knowledge management must not be seen as an essential element for high tech institution but as a network and life stream for competition and cooperation both internally and externally in any business entity. Although some factory model human resource personnel may argue that knowledge management is typically link to common areas of process improvement, productivity and cost reduction, the areas of innovation and internal competency which leads to greater returns over an extended period of time.

According to [27], product and service innovation leads the list, followed by production and organizational improvements. Product innovation keeps the top-line alive, while internal process innovations erase costs against the bottom-line. These two broad strategic directions foster interactions between business goals and knowledge management. If we take a close look at a typical model of business strategy there are three broad directions: (a) Market growth or value, (b) Operational effectiveness, and (c) Customer intimacy. Market growth or overall value through services drives product innovation; Effectiveness drives internal knowledge sharing and management, to leverage use of knowledge to avoid costly reinvention. And customer intimacy drives changes across the organization, requiring innovating for customers, leveraging customer knowledge, and driving revenues through customer retention.

#### **5. Conclusion**

During the past year the business worlds has witnessed the interest in knowledge management and the acceptance of the word technology however despite the popularity such implementation have been based on outdated business models . There is a need for the development and understanding of knowledge management as a catalyst for creativity and innovation. Human resource personnel need to rise to the occasion and realize that knowledge management is the way forward to foster agility to be at pace with demands by the ever changing and emerging business landscape. In today's business landscape the agonizing call for transition in no longer an option but a must

to cushion the new paradigm shift as to how business should rethink about fundamental transition of business strategy, the development of technology and the role of organization knowledge processes, the economic sense of human as the most vital assets within an organization for innovation. Knowledge management will continue to dominate the business environment throughout this era since it creates a platform and process between business and human capital. It will continue to remain a strategic process by which human resource personnel enable their workforce to move from passive to active information source to empower subordinate and colleagues. Knowledge management remains potentially the most powerful competitive asset contributing to advance improved success and when properly incorporated, implemented and sustained leads to mutual value creation, innovation, communities of creativity, performance, empowerment and joint intellectual capital.

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