Knowledge Management: Impact of human resource productivity in competitive advantage

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ABSTRACT: Knowledge management (KM) is the process of capturing, developing, sharing, and effectively using organizational knowledge. It refers to a multi-disciplined approach to achieving organizational objectives by making the best use of knowledge.

Knowledge Management, (KM) is a concept and a term that arose approximately two decades ago, roughly in 1990. Quite simply one might say that it means organizing an organization's information and knowledge holistically, but that sounds a bit wooly, and surprisingly enough, even though it sounds overbroad, it is not the whole picture. "Knowledge management is the process of capturing, distributing, and effectively using knowledge."

Knowledge Management may be viewed in terms of:

- People – how do you increase the ability of an individual in the organization to influence others with their knowledge
- Processes – Its approach varies from organization to organization. There is no limit on the number of processes
- Technology – It needs to be chosen only after all the requirements of a knowledge management initiative have been established.
- Culture –The biggest enabler of successful knowledge-driven organizations is the establishment of a knowledge-focused culture
- Structure – the business processes and organizational structures that facilitate knowledge sharing
- Technology – a crucial enabler rather than the solution.

This paper analyzes the impacts and dimensions of knowledge management upon the innovation and labor productivity within the organization, and how knowledge management affects the firm’s innovative performance. A key component of knowledge management is to provide access to stored knowledge components to improve decision making and to facilitate knowledge acquisition by the user.

This paper would help the knowledge managers systematically grasp “knowledge about management knowledge” and get a “deep and full” understanding of the nature, scope and methodologies of knowledge management for developing the competency of human resource towards the competitive advantage. Knowledge management builds on the interplay between articulated and tacit knowledge at four different levels:

- The individual
- The small group
- The organization, and
- The interorganizational domain.

These are related to organizational characteristics, such as employment systems, career patterns, and organization structure. This research paper reveals to study the relationship between effective factors on enhancement of human resource productivity and knowledge management in IT sector. These paper highlights the effective factors are:

- Empowerment
- Quality of work life
- Individual factors
- Motivational factors
- Organizational culture
In order to manage the organization well and to keep the competitive advantage over their rival and to gain access to the highest technologies the organization have to use the knowledge management and productivity methods and techniques in their organizations to compete the competitive advantage.

**KEY WORDS:** Human Resource Productivity, Competitive Advantage, Knowledge management, Knowledge creation, Knowledge distribution, organizational knowledge.

**INTRODUCTION**

Knowledge is present in ideas, judgments, talents, root causes, relationships, perspectives and concepts of every individual. Knowledge resides in an individual brain or is encoded in organization processes, documents, products, services, facilities and systems. Knowledge is the result of learning which provides the only sustainable competitive advantage. Knowledge is the next paradigm shift in computing following data processing and information management. Knowledge is all about action, focused innovation, pooled expertise, special relationships and alliances. Knowledge is value-added behavior and activities. Knowledge management is the process of capturing, developing, sharing, and effectively using organizational knowledge. It refers to multi-disciplined approach to achieving organizational objectives by making the best use of knowledge.

The move from an industrially based economy to a knowledge or information based one in the 21st century demands a top notch knowledge management system to secure a competitive edge and a capacity for learning. The new source of wealth is knowledge, and not labor, land or financial capital. It is the intangible, intellectual assets that must be managed. The key challenge of the knowledge-based economy is to foster innovation.

**Types of Knowledge**

- **Tacit:** Unarticulated knowledge is more personal, experiential, context specific, and hard to formalize; is difficult to communicate or share with others; and is generally in the heads of individuals and teams.
- **Explicit:** Explicit knowledge can easily be written down and codified.

**Purpose of knowledge management:**

The purpose of the knowledge management process is to share perspectives, ideas, experience and information; to ensure that these are available in the right place at the right time to enable informed decisions; and to improve efficiency by reducing the need to rediscover knowledge.

**Importance:**

- Knowledge can be embedded in processes, products, systems, and controls.
- Knowledge can be accessed as it is needed from sources inside or outside the firm.
- It is versatile and can be transferred formally, through training, or informally by way of workplace socialization.
- It is the essence of the competitive edge.

**Measurement of knowledge management:**

Systems as such cannot be measured, but it is possible to find possible to measure some of their attributes. Businesses are highly interested in the capacity of the KM systems to produce value, defined here as success.

The type of measurement approach is also very important. Value creation does not take place in the domain of the accounting system, it is only reflected there. At the Conference of Measuring and Valuing Intellectual Capital held in December 1998, Leif Edvinsson, Corporate Director of Intellectual Capital for Skandia Assurance, asked a simple, but very important rhetoric question: “Is your measurement system blocking you for your future, or is it enabling your future?” A measurement approach for a knowledge management system must be based on a holistic view of the organization for a long term perspective.

There were several attempts to measure the success of knowledge management efforts in particular organizations, by using elements such as:

- The number of patents, trademarks, copyrights, trade secrets;
- customer satisfaction;
Financial bottom line results (stock prices, dividends, net present value);
- The effectiveness of business processes;
- The ability to sustain innovation;
- The changes and improvements obtained through organizational learning;
- Quantified Critical Success Factors.

One thing is clear: the traditional ways of financial measurement fall short in this domain.

**REVIEW OF THE LITERATURE**

Knowledge management is a key concept in today’s business world. Evidence of this fact is apparent if one only peruses the current business, management, and organization literature. On the surface, it looks as if knowledge management just appeared toward the end of the 1990’s. Many of the practices set up in organizations can be broadly construed as contributing to the knowledge agenda. These knowledge projects range from setting up an intranet, using Lotus Notes or other team-oriented software, creating personal development plans, mentoring, or sharing information on best practices. Increasingly, organizations are creating specific initiatives or programs with a knowledge focus. The purpose of this paper is to provide an overview of the concept of knowledge management, identify key terms and concepts related to knowledge management, trace the history of the study of knowledge management, and explain the major areas of study and thought related to the phenomenon.

While there are many organizations undertaking knowledge management projects, there is dispute over what exactly knowledge management is. One cannot get a clear picture of knowledge management without studying the concepts of knowledge and information and other related terms. Much of the confusion that surrounds knowledge management is due to scholars’ varied opinions on distinguishing knowledge from information. The misconception that the two terms are interchangeable can have disastrous effects in the business world.

![Figure 1: The SECI Process](image-url)

Figure 1 illustrates how the four nodes of knowledge form a continual cycle that is shaped by series of shifts between the different modes. Nonaka and Konno (1999) maintain that there are various triggers that induce the shifts, such as interaction, dialogue, use of metaphors, or experimentation (pp. 39-42). It is important to note that the movement through the four modes is not a circle, but rather a spiral. This spiral becomes larger as it moves up the ontological levels from individual to group to organization through interorganization.

Figure 2 demonstrates the upward spiral of knowledge creation developed by Nonaka (1994). He developed this in response to a common knowledge management paradigm that provided a static and passive view of the organizational knowledge agenda. While it provided for knowledge processing, the model did not take into consideration what knowledge was created by the organization (p. 14).
Objectives of the Study

- To study knowledge management for budding the capability of human resource towards the competitive advantage.
- To analyze knowledge management upon the innovation and labor productivity.
- To provide access to stored knowledge mechanism to develop decision making and to make possible knowledge gaining by the user.
- To analyze the relationship between valuable factors on improvement of human resource output and knowledge management in IT sector.
- To find out the various places of interest of valuable factors.
- This study useful for further research papers by analyzing data, recommendations, suggestions and conclusion.

Scope of the Study

Knowledge management is emerging as a large academic discipline world over. Its scope extends to Individual, small group, organization, and inter-organizational domain and factors like Empowerment, quality of work life, Individual factors, motivational factors and organizational culture.

Companies are making their choices regarding the scope of programs and problematic within knowledge management. Decisions are made that lead companies to navigate in some parts of the knowledge management domain while neglecting others.

There are three contexts of knowledge: Individual, groups and organizational and five different activities involved in knowledge management:

- Scam/Map
- Capture/Create
- Package/Store
- Share/Apply
- Transform/Innovate
Introduction:
My research methodology requires gathering relevant data from the specified documents and compiling databases in order to analyze the material and appear at a more complete understanding and historical reconstruction of the lives of selected right information.

Quantitative Research:
Generally two different categories of data collection tools i.e. quantitative and qualitative, but this paper is rooted in a quantitative “theory of knowledge” position that recognizes the importance of location the research within a particular historical context. It is also takes seriously the knowledge management of these contexts and the identities particular issues.
Quantitative research includes designs, techniques and measures that produce discrete numerical or quantifiable data. Data analysis is mainly statistical (Deductive process).

It is characterized by:
Analytical Research: Analytical research is a type of research that utilizes critical thinking to find out facts about a given topic and from the answers obtained develop new and useful ways of doing things. Critical thinking is a method of thinking that puts assumptions into question to decide whether a given claim is true or false.

Data Collections:
- **Paper-based sources:** Books, journals, periodicals, abstracts, indexes, directors, research reports, conference papers, market reports, annual reports, internal records of organizations, newspapers and magazines.
- **Electronic sources:** CD-ROMs, online databases, Internet, videos and broadcasts.

Above mentioned data collections are commonly used for reference researchers but in this paper date were collected from Books, journals, online databases, internet and other websites.

Impact of human resource productivity in competitive advantage

- **Individual/Personal knowledge management:**
  Individual knowledge management is a collection of processes that a person uses to gather, classify, store, search, retrieve, and share knowledge in his or her daily activities and the way in which these processes support work activities. It is a response to the idea that knowledge workers increasingly need to be responsible for their own growth and learning. It is a bottom-up approach to knowledge management (KM), as opposed to more traditional, top-down KM.

- **People and their behavior inside the organization:**
  Several studies showed that the missing ingredient in many KM systems is not the technology, but people. What most companies overlook is not hardware or software, but the so-called “wetware”(Davenport 1999). Even if typical wetware architecture for successful data-to-knowledge transformation cannot be determined, there are few types of people involved in most examples of successful use of data for decision making and management.
  - Dedicated scientists, who cannot only tell the algorithms where to look in the data, but also explain the results to managers;
  - Senior executives who realize the value of data analysis and who sponsor efforts to create data warehouses and getting business value of them;
  - Analysts and middle managers who know what data is available and how to access it”
  - IT specialists who see the big picture and try to create the circumstances in user organizations in which data is used to solve business problems.

Several major problems regarding people seem to confront organizations involved in KM projects:
- there are still IT specialists with a narrow vision of their work, which need to expand their vision;
- the need to enhance learning and improve communication inside the organization;
Persuading employees to give their knowledge is not an easy task. It can be done either by convincing them of their value to the organization by offering them shares or share options, or by building-in rewards in terms of future training and development in return for sharing what they hold already.

The knowledge management process:
Knowledge management is the management of corporate knowledge that can improve a range of organizational characteristics by enabling an enterprise to be more “intelligent acting” (Wiig 1993). It helps the organization to find, collect, select, organize, disseminate and transfer information and expertise. The cycle starts with scanning the organization and mapping existing knowledge; both explicit and tacit knowledge should be identified. There must be a selection of knowledge, retaining what can be valuable for the organization, not only in present, but also in the future.

The next step is to transform knowledge, trying to adapt it to new situations, i.e. to innovate. The creation of new knowledge marks the beginning of a new cycle: this knowledge has to be captured, stored, and shared and so on. The problems occurred and the solutions adopted can also be used by organizations to develop a continuously updated knowledge base.

The management practices:
Knowledge management requires commitment from senior management. They must understand who has knowledge – in order to support systems for its creation and application, where knowledge resides, which knowledge needs to be shared, with whom, how and why. Without their support, no knowledge management system could meet its requirements. It must be clearly understood that successful knowledge management does not depend on new software tools, but on a new perspective to link the pieces of information that promotes understanding and accelerates action.

The culture of the organization:
The readiness of people to share their knowledge depends a lot on the culture of the organization. The corporate mindset- the company comes first, and people are fortunate to have a job -prevents people from sharing and disseminating their know-how, trying to hold onto their individual powerbase and viability. On the contrary, in an open organization, incentives are built around integrating individual skills and experiences into organizational knowledge. The company is seen as being made up of individuals – each of whom is important for the company, because of his different capabilities and potentials. Practice shows that flat and network organisational structures are more appropriated environments for building a knowledge management system than hierarchical ones. Hierarchical organisations are far more conservative, not encouraging employee inputs and suggestions and preventing the companies to become learning organisations.

Technology Employed:
There is a large range of IT utilized to support knowledge management systems, including desktop video-conferencing, document management systems, intranet-based webs, relational database management systems together with ODBC (open database connectivity) and SQL (structured query language), object oriented database management systems, artificial intelligence tools, information retrieval engines, help-desk applications, data warehousing and data mining tools, groupware and workflow systems, authoring systems, push technologies and agents, brainstorming applications.

The discussions on this subject introduce the concept of knowledge warehouse, incorporating knowledge contribution and collection, knowledge retrieval, knowledge agents and distribution systems. Content management and “smart documents” are another hot topic of the field.

It is important to mention that IT is only an enabler for communication inside knowledge management systems, and must be treated as such. In many situations, the knowledge management system is confounded with its IT infrastructure.

Competitive Advantage in Knowledge management:
According to the resource based view of the firm, competitive advantage can only occur in situations of firm resource heterogeneity and firm resource immobility, and these assumptions serve to differentiate the resource-based model from the traditional strategic management model. Firm resource heterogeneity refers to the fact that resources vary across firms. Firm resource immobility refers to the inability of competing firms to...
obtain resources from other firms or resource markets. In the environmentally focused strategy model, resources are considered mobile in that firms can purchase or create resources held by competing firms.

**CONCLUSION**

Knowledge based management processes are based on knowledge of something in advance of its occurrence and adaptation. In traditional management processes, optimization was based on prediction. The ability to deploy knowledge will be the principal differentiator for the 21st century. Continuous redefinition of business goals, objectives and strategies, fundamental and irregular change-these seem to be the future’s traits.

Knowledge management projects must be managed as change projects, not as IT projects. Even if such projects start with the capture of islands of knowledge, the circle must be closed and the obtained knowledge shared in order to have an impact of the company’s profitability. It is also necessary to further incorporate the island of knowledge in holistic and dynamic perspective, where the business needs dictate the priorities.

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