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Knowledge Management and its Impact on Organisations: An Assessment of Initiatives in the Industry

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Abstract

Knowledge management (KM) has gained a lot of importance due to the value, which it has offered to the organisations. It has been observed that Information Technology (IT) has further made this task easier. KM efficiency of an organisation varies due to its KM capabilities. KM initiatives in the industry are numerous and IT is an important tool to get these implemented. This paper helps to understand the organisational impact of KM initiatives and its assessment. The paper has two parts. The first part, which talks about organisational impact of KM is exploratory in nature. The second part is based on primary data collected from listed BSE companies. Data is analysed to check whether organisations, which are practicing KM, are aware that they are doing KM. The paper concludes that better the KM capabilities, better will be the KM implementation results. The benefits of KM are both tangible and intangible. The paper would be helpful to the industry and to the researchers and would facilitate future research in the area to assess the impact on performance by organisations applying KM.

Keywords: *Knowledge Management, IT, Organisational impact, KM capabilities.*

INTRODUCTION

Gone are the days when technological changes were introduced and were there to stay. These days, product life cycles are so short due to changing customer preferences that even before a technology is known in the market, a new one is on its way to make the previous one obsolete. After KM was introduced, some thought it to be just another jargon, others thought it to be a corporate fad, which would fade in due course and some thought it was over hyped. While one cannot completely deny these allegations, yet there are numerous cases where it has been proven that KM is much more than all these and that organisations need to be aware of the benefits, which flow to them by following KM practices. Once the benefits of KM became visible, KM was started being adopted as a corporate strategy by many big and small organisations. Even after so many years of KM's existence, there is no standardised KM assessment approach probably because the benefits, which flow to the organisations, are not only tangible but also intangible.

It is noteworthy that KM does not only mean managing knowledge for

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the sake of knowledge. Common features of KM programme include the following-

- Processes and tools for connecting knowledgeable people dispersed over several units, locations and different time regions.
- Processes and tools for company-wide accessibility of information about best practices, guidelines, experiences, good ideas, results of teams and projects.
- Learning tools for teams and individuals for improving the performance of projects, team activities and to bring the learning perspective into 'ways of working'.
- Inventories of knowledge areas to answer questions e.g., what are the relationships between processes and key knowledge areas? Which parties/ individuals own this knowledge? (Spek and Kingma, 2000).

The bigger purpose of KM is creating value in order to leverage, develop, and improvise competencies of the firm and improve its knowledge assets to achieve corporate goals. Knowledge management implementation has four broad dimensions, which includes the following-

- *Organization related:* Corresponds to right practices, environment, and organisational culture including the internal systems.
- *Management aspect:* Relates to the strategy adopted and the leadership team.
- *Technology related:* Implies the precise systems, equipments and the related technologies being implemented properly.
- *Organisational Politics:* Appropriate assistance for implementing and sustaining initiatives involving entire organizational functions whose implementation is costly in terms of time and funding. For such activities, the return on investment is usually not tangible and directly relatable (Frost, 2010).

KM is all about doing things smartly including the business and working. Knowledge cannot be of use until it is converted into action by the human resource and applied for business benefits (Spek and Kingma, 2000). Recently knowledge management has hogged the limelight for success and sustainability in the fast changing technological world.

PURPOSE OF THE STUDY

The study aims to cover the following-

1. Exploring the difference between knowledge and information technology
2. Getting to know the nuances of knowledge management
3. Reviewing KM capabilities for any organisation and check if they impact performance in any manner whatsoever

4. Assessing the knowledge management initiatives in the industry

METHODOLOGY

The methodology is divided into two major parts. The first part of the paper, which discusses the organisational impact of KM, is exploratory in nature. Its backbone is the outcome of the literature review. The second part of the paper talks about KM initiatives, which is based on primary research wherein data was collected from listed companies of Bombay Stock Exchange (BSE) in India with a sample size of twenty. The question asked to respondents was to assess whether they understood the prevailing practices in their firm to be KM or not. The responses obtained have been presented by way of a pie chart showing percentage of respondents under each category.

Knowledge, Data and Information Technology

Data and information are different but together they can be utilised for many purposes in the business. Well-developed or precise information is incorporated in a management information system. Information could be used for improving the existence of knowledge potential within an organisation since data, which is acquired from the database in its early stage, is primarily supported by organisational records and tacit knowledge. The organisations' search for information is part of a process by which the organization adapts to its outside environment for long-term survival and gain competitive advantage. Organizations specifically search for information on exact activities like purchasing of new equipment and launch of a new product in order to derive benefits of enhanced final decisions. The requirements of information depend on the nature of every situation and also the requirement to frame competitive strategies (Wetherbe, 1991). Information could be defined as refined data and knowledge is refined information.

KM symbolizes cultural style of operating in the market. To let this culture succeed, Information Technology (IT) is required. These days IT is acquiring a decisive role in KM and is one of the most important tools used to make decisions to fight competitors and to capture target markets. To capture and disseminate information, which the company has acquired over the years to its knowledge workers, software can be very handy. The information derived from the software can then be used by the knowledge workers to integrate the organisational data and develop solutions to the problems in hand. The information about customers, competitors, technological databases, decision support systems etc can be used by knowledge workers to improvise on firms' performance. Investing in knowledge management is like creating an intellectual asset, which can go a long way in making the firm gain competitive

advantage along with the physical assets (Carneiro, 2000). A major portion of the investment in KM to preserve it is in the form of IT software and hardware. It is important to understand that knowledge assets' characteristics are very different from the usual tangible assets but even that does not reduce their significance.

Not all organisations record same level of performance with their KM. It is like every patient responding differently to the same medicine depending on the severity of the infection and his own body immunity. There is something, which makes some organisations more successful with KM than the others do. To understand this further it is important to have a look at the concept of KM capabilities.

KNOWLEDGE MANAGEMENT CAPABILITIES

KM capabilities have been categorized into two major types – knowledge infrastructure capability and knowledge process capability (Gold et al., 2001). In the context of patient and medicine example discussed earlier in this paper, the organisations' body immunity can be called as its knowledge infrastructure capability and the severity of the infection akin to the process capabilities. These two form the backbone of the KM capabilities and are discussed in detail further in this paper.

Knowledge infrastructure capability: There have been multiple researches, which recognize the significance of owing a supportive and efficient knowledge infrastructure to strengthen a firm's knowledge management initiatives. The firm's knowledge infrastructure capability is made of different elements. The infrastructure is important as it provides a platform to the growth of KM in the organisation. If the infrastructure were robust, it would help in faster growth with comparatively lower cost (Mills and Smith, 2011).

- Technology: IT systems that facilitate integration of knowledge and information comprise of the technology element of infrastructure. They help in formation, transfer, storage and protection of the firms' knowledge resource. There is no denying of the fact that an appropriate technology infrastructure is imperative for efficient KM. However, the studies, which establish the link between IT, and organisational performance measures, have been unsuccessful in establishing whether IT directly contributes to performance or not (Powell and Dent-Micallef, 1997). A study by Powell and Dent-Micallef (1997) on the US companies found that IT itself did not enhance organizational performance but when combined with other human and business assets it could result in increased organizational performance due to synergies. Some authors have pointed out that lack of association between technology and organisational performance in

erstwhile researches could be because once a technology is introduced, it is copied easily resulting in it being a weak source for competitive advantage. It can be said that technology infrastructure is a crucial enabler of other knowledge resources like knowledge acquisition and knowledge application processes, which ultimately enhance organisational performance although it may seem that it does not contribute directly to organizational performance (Seleim and Khalil, 2007). Thus, IT may not seem to be contributing directly to the organisational performance but it surely facilitates the process. The absence of IT makes the KM implementation process rugged and slow. This itself is a clear indicator of the role, which IT has to play for the success of KM in the organisations.

- Organizational culture: As each country is recognised by the unique culture it possesses, every organisation becomes different from the other based on the culture, which it possesses. The success of any change in the organisation is determined by the flexibility prevailing in the organisation, which is inter-dependent on its culture. Culture in the context of KM is defined as a complex collection of values, beliefs, behaviors and symbols that influences knowledge management in organizations (Ho, 2009). For knowledge management to bloom, a knowledge-friendly culture is one of the most important factors. Many a times it is seen that KM initiatives are taken only by the top-level management and the employees join since there is a pressure from the top to be a part of it. This kind of attitude is not very conducive to the growth of KM since implementing KM is not only a change in the systems and practices but also to the mindsets of the individuals. It can be said that culture not only plays a critical role in the growth of KM in the organisation but also in its success in the long run.
- Organisation Structure: A flat structure is easier to manage as decision making is quick and changes can be implemented faster. The bigger the organisational hierarchy, the more time it takes for the activities to be completed. The organisation structure is an outcome of the culture, which the organisation possesses. However, it is still easier to change the structure but not the culture.

The second important part of the KM capabilities is the knowledge process capabilities. According to Gold et al (2001), knowledge process capabilities are necessary for leveraging knowledge infrastructure capabilities. There are four broad dimensions of process capabilities as per Gold et al (2001) viz., acquiring knowledge, converting it into useful form, applying or using it, and protecting it. Each one of them should have an impact on the performance. Knowledge management does not only include the management of knowledge

assets but also the management of processes which works upon the assets for the purpose of development of knowledge, preservation of knowledge, utilisation of knowledge, and its sharing.

The figure below is a pictorial presentation of process capabilities. Once the process is achieved, the new challenge starts the trigger again and the entire process is repeated. This is done to achieve better organisational performance.

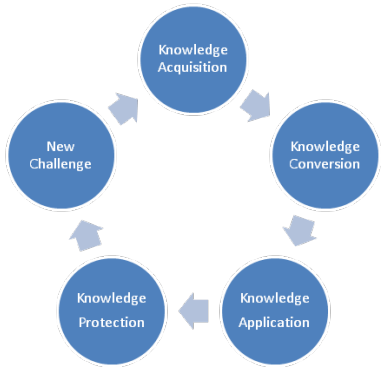

Figure 1: Pictorial representation of knowledge process capabilities

- Acquiring Knowledge: Acquiring knowledge is an important part of knowledge process capabilities because without acquiring knowledge, it cannot be put to use. Acquisition can be defined as the firm's ability to recognize, acquire and accumulate knowledge (both external and internal), which is crucial for its operations (Gold et al., 2001). Acquiring knowledge involves several aspects including conception, sharing and distribution. Knowledge acquisition and performance measures have a strong and positive relationship subject to the condition that the acquired knowledge is used appropriately. Over the years, there has been a lot of research, which shows that knowledge acquisition, creation and dissemination play an important role in improving organisational performance.
- Converting Knowledge: To be used optimally, knowledge, which is captured, has to be converted to organizational knowledge for effective utilization in the business. The process of conversion enhances the usability of data. Therefore, it would right to state that the process of knowledge conversion influences performance outcomes.
- Applying Knowledge: According to Bhatt (2001), application of knowledge is the activity of making knowledge further active and appropriate for the firm's value creation. In order to create value in organisations, knowledge needs to be applied in various ways to products and services like repackaging of available knowledge, training of employees and

motivation of staff for creative thinking. It also includes using employee's understanding of the company's systems, products and services. Firms, which create knowledge at low cost and employ it more efficiently than the competitors, tend to gain competitive advantage (Dröge et al., 2003).

- Protecting Knowledge: For effective operations and organisational control, protection of knowledge is important. Protection of knowledge includes using copyrights and patents along with information technology systems, which allow security of knowledge by way of filenames, usernames, passwords, and file-sharing protocols that assign rights to authorized users (Lee and Yang, 2000). Knowledge protection is an area of debate in itself. Most of the IT companies have been proactive in their approach towards knowledge protection and have laid down strict policies for infringement of patents and copyrights. Those organisations, which practice knowledge protection, claim that it does create value for the organisation in the long run.

Post assessment of the KM capabilities and their link with performance, it is now important to have a look at various impacts of KM on the organisations.

ORGANISATIONAL IMPACT OF KM

Owing to the complex nature of knowledge capabilities, firms possess different levels and mishmash of resources which collectively make their knowledge capability. The performance would differ across firms depending on which resources are contributing towards operational benefits, enhanced performance and competitive advantage. There are few resources, which would have impact on organisation's performance alone, but along with KM, their impact on performance gets magnified. Some resources are direct contributors to performance while others are indirect which means that the impact on performance is directly visible in few cases, while in others it is reflected through other parameters. In addition, the contribution to performance could be both in the form of financial and non-financial. However, it has been observed that even the non-financial parameters result in bottom line growth in the long-run.

Each activity conducted during business operations is designed to achieve an object in hand and the same holds true for knowledge retention and its use. While some benefits of KM are direct and deliberate, there are others which are implied and occur due to synergies flowing as a result of using knowledge management. The important organisational impacts of KM have been listed below. It is important to understand that the critical success factors for these

are the KM capabilities, which have already been discussed above. These are -

a. Innovation
b. Competitiveness
c. Increased Value for customers
d. Improved Process Performance
e. Successful projects
f. Financial Returns – Responsiveness to knowledge
g. Growth of resources

Innovation

KM facilitates innovation. There are numerous studies, which discuss the positive relationship between KM and innovation. An important characteristic of knowledge is that its usefulness is progressive in nature. Once a piece of knowledge is acquired, with creativity it can be transformed to the next level. Looking back at history all the inventions have been done due to this characteristic of knowledge. The interaction of multiple system elements results in the next knowledge level being created which implies that innovation is highly dependent on the evolution of knowledge. Knowledge is not only needed for creation of new products but also for the successful running of the existing systems, which needs assistance of efficient knowledge level. Knowledge is needed for successful technological modifications (Darroch, 2005).

An important role in innovation along with knowledge is played by the knowledge workers. In order to innovate, managers need comprehensive and up-to date information for their activities, which is provided to them by the knowledge workers. If the knowledge workers are not trained sufficiently and equipped to upgrade their knowledge, they would not be motivated to perform their task. This is one area where KM would play an important role. It has been observed that IT companies are usually quicker in adapting to latest techniques in knowledge management compared to the non-IT firms. Given the availability of the best professionals in the area of hardware and software, IT firms are good with software developments. They can develop software to codify knowledge, which can then be used for innovation in the organisation. For example, cloud computing was a technique which was created by IBM to be used for internal use. Thereafter this became so popular that is now being used for managing massive data across distant locations.

Competitiveness

In the current business scenario, there is no denying the fact that the firm's capability of learning faster than competitors becomes a crucial source of competitive advantage (Lopez et al., 2004). An organization is successful when it is able to absorb novel ideas and convert them into action faster than its competitor. For any business it is important to "know what we know" and put knowledge to best possible use. The organisational knowledge is spread across various places and needs to be put together using KM.

The modern approach strongly believes in KM being a key factor in firm's performance as it deals with multiple resources aiding decision makers in more than one way. Companies, which spend heavily on preserving knowledge, know that KM would provide them with competitive advantage in the long run.

The contribution of KM towards competiveness could be multiple. Firstly, it can help in managers in anticipating problems faster and better. This will result in quick problem solving. This is very important for any company but more so for IT companies since a timely detection of problem can result in immediate damage control. Secondly, good KM helps managers in analysing and evaluating environmental scenarios to look for adequate responses in the backdrop of global objective. Thirdly, being proactive helps in controlling costs, which further helps an organisation to become more competitive. Take the example of the Indian BPO industry. When TCS, HCL and Infosys would be bidding for a contract, the one, which has the lowest bid, would become the preferred vendor. Cost efficiency can be achieved by the BPO companies by practicing KM since they would have information for projects, best operating procedures etc. to attain maximum customer satisfaction.

Increased Value for Customers

"Trade tactics" was a term, which was coined long term back, but it holds very true even today. Every business has its complexities like ways of improving customer satisfaction, developing new product, faster approach to market etc. KM facilitates knowledge sharing and the efficacy of the KM process allows organizations to respond to customers quickly because they have flexibility and adaptability in dealing with the changing business environment (Lee et al., 2005). When employees have relevant knowledge, they use it to create value in the organizational products and services. Problems or customer requirements are solved more quickly. This responsiveness of employees improves customer satisfaction. (Wong & Aspinwall, 2004 cited in Supyuenyong & Swierczek, 2011). In the services sector, the customers are the prime focus of business. This is where KM comes into play since value for customers can be maximised by creating services, which they would prefer.

Improved Process Performance

A firm is defined as an amalgamation of tangible and intangible assets for performing specific activity in order to cover a real or a potential demand on the market and to obtain profits from it. Performance can be defined as how well the individual's work is done which includes efficiency, effectiveness and quality of work (Muhammed et al., 2009). Being innovative and competitive automatically results in improved process performance. KM contributes to both innovation and competiveness ultimately resulting in improved process performance.

Successful projects & Growth of Resources

IT companies typically work on a model whereby they have client projects, which need to be completed within a stipulated time. These projects are profit centres for the company and cost and revenues are booked for each one of them. Based on the discussion above, it is clear that more a project team is aware of the knowledge available in the organisation, lesser time it would require adapting to additional technological changes and completion of projects. Some authors have tried to explain the relationship between IT resources and firm's performance using the resource-based view (RBV). The RBV states that long-term performance is a subset of competitive advantage, which further is a subset of the resources, which a firm possesses. Thus, it can be said that the source of organisation's capabilities are resources and capabilities result in competitive advantage.

The use of resources efficiently creates synergies, which lead to their further growth. Thus, efficient use of resources not only leads to growth of resources but also creation of new resources.

Financial Returns

Organizations should not expect to see a significant return on investment from knowledge management too quickly (Vestal, 2002, p. 2 cited in Vidović, 2010). As organizations are turning to management of knowledge and skills their employees possess knowledge assets as a means of survival and success in today's knowledge economy. Knowledge management as discussed above can and should be recognized as a tool to gain competitive advantage, achieve long-term success on the market and consequently receive benefits in terms of financial performance. Unfortunately, there is no thorough way to quantify some of the basic advantages of knowledge management such as increased trust among employees, personal growth of employees, increased awareness of employees, value of new connections and relationships between employees or benefits from mentorship, and all the implications arising from those

advantages (Vidović, 2010, p. 5). The measurement of the impact of KM on financial returns is an ongoing research. Though the link between KM and financial performance has been proven in many researches, it is not being explored in detail as to which parameters of financial performance are directly being impacted.

Analyzing worldwide researches of the connection between KM and financial performance, the fact is that in general researches have concluded that there exists a connection between the two. More to it, almost all of those researches found that some aspects of knowledge management are more important than others or that only some aspects of knowledge management are connected with financial indicators. Of the various factors of success using knowledge management, the ones that are significantly related to financial indicators are knowledge culture and measuring knowledge management. (Vidović, 2010, p. 12)

AN ASSESSMENT OF KM INITIATIVES

In today's world, many organizations are working on projects, which create value from their intangible assets without a formal KM policy/strategy. The managers are managing the knowledge assets but could be calling them with a different name (Talisayon, 2009).

To assess whether employees know that they are practicing KM, a questionnaire was circulated to listed BSE companies. The companies selected were based on their turnover. Companies from both manufacturing and services sector were considered. A list of 50 top performing companies were approached for this pilot study but responses were obtained only from twenty companies making a response rate of 40%. The fifty companies were selected using a simple average of Sales and Income from Financial Services arranged in descending order. "Income from Financial Services" was taken for the banking companies since their revenue is not recorded under "Sales" but under this. The responses were obtained to check the employees' perception of existing KM practices in their respective organisations. The respondents were middle or top level managers who had been with the organisation for more than two years and were quite familiar with the knowledge management practices if any. Of the 20 respondents, 30% of the respondents felt that they were practicing KM but under a different name. On a further investigation of the detailed practices, it was realised that they were actually KM implementing organisations but the employees were not aware of the same since there was no formal declaration. Another 30% felt that KM was a strategic part of their business. A major chunk of 35% felt that knowledge management practices could be beneficial for the organisation but according to them they were not

into full-fledged KM practices. A pie chart of the responses of the survey has been presented in Figure 2.

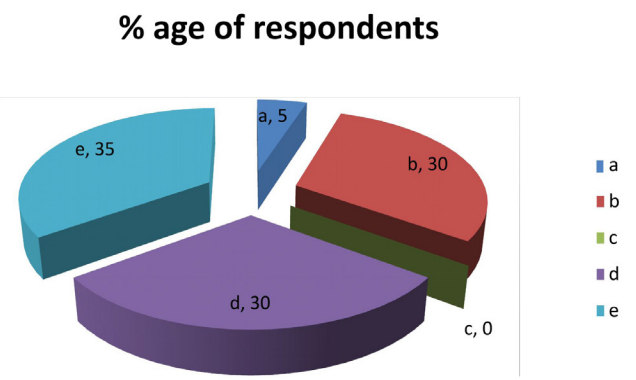

Figure 2: Pie Chart of the responses from the primary survey

Options in response to the question "what do you think of knowledge management" were defined as-

a. Never heard of it.

b. Something which we are doing already but under a different name.

c. It is a management fad.

d. It is a strategic part of their business.

e. Something that could be beneficial for the organisation.

The aim of the questionnaire was to assess the level of awareness prevalent in the Indian industry about KM. BSE listed companies are considered the most reputed organisations in the country and by selecting the top from the list, it was ensured that the companies being studied are the ones, which have an impeccable record of accomplishment of growth and efficient performance. The responses of these companies would be critical to get a feel of the general KM understanding across board in the Indian corporate sector since they can rightly be called as the trendsetters.

The survey results showed that one respondent had never heard about KM. This employee belonged to category "A" of the responses to the above question. One reason for this response could be lack of KM practices in the company and the other reason could be the lack of exposure to the employee on KM related areas. However, some more questions were posed to the respondent to ascertain that it's not his/her ignorance which is resulting in this response and it was found that such respondent's organisation was not into KM application currently.

The second key finding was that one –third of the companies were practicing KM in their organisations but they were calling it with different names. These were the companies where respondents belonged to the "B" category of the response to the question given above. It is noteworthy that organisations do have something like KM in practice for improving their efficiency but on the other side it is not being promoted as a formal KM practice. Therefore, the employees who are into it would know the true worth of it but others may not have a clue as to what it is all about? If it were advocated as a KM practice, it could give better results to the organisation.

There were no companies in the BSE sample, which thought KM to be a management fad as indicated in the survey results with no responses under category "C". This is certainly good news since India's corporate approach towards KM seems to be more serious and planned rather than a fancy. If KM were practiced as a management fad, the results would never be long lasting and effective since the true spirit would always be missing.

Another one-third of the respondents felt that KM is a strategic part of their business. These respondents belonged to category "D" of the question above. This is a good sign since it shows the seriousness with which some organisations are working on KM in their organisations. It also shows that there is sufficient awareness for KM in the Indian companies, which would later grow for good. If the results of category "B" and "D" are combined, it makes two-thirds of the response rate wherein KM is present in the organisations in some way or the other. This shows a strong presence of KM culture prevalent in the country's corporate sector.

Under the last category "E" which belongs to respondents who do not have KM currently in the organisation but who are aware of the benefits it could bring to the business, 35% respondents agreed. This implies that while there is no formal KM practice in their firms currently but if given an opportunity, they would be open to implementing it since they are conscious of the benefits, which would flow to them in the long-run. This shows a positive approach towards KM practices and the willingness to have them in the organisation.

If one was to look at the results in totality, they indicate the positive disposition which India Inc has towards KM. Almost 95% of the respondents were either practicing KM or open to applying it, if given an opportunity. The results also show that there is a platform available for KM to bloom. The only thing needed is that basic effort to put it in place and derive the benefits.
Important findings from the survey are-

- A positive approach towards KM in the organisations exists.
- None of the respondents feels it is a management fad but most of them feel

it could bring substantial benefit to the business, if implemented.

- Even while it is not being advocated a lot, KM is present in many businesses in some form or the other.
- Since the BSE listed companies are role models for the others, KM implementation could improve in the country in future.
- Future research can be aimed at finding if other businesses are practicing KM.

CONCLUSIONS

There is no denying the fact that knowledge has replaced other sources of production as the main source of wealth creation. The technologies, which enable effective and efficient KM in the organisations, are called as Knowledge Management Systems. The KM process relates to the integration of active enterprise-wide practices to manage knowledge beginning with creating or acquiring business knowledge from both internal and external sources. Knowledge is tacit or explicit. While explicit knowledge is expressed, the real challenge lies in capturing tacit knowledge. Value is added by categorizing and storing knowledge to make it accessible in the organisation. The stronger the KM capabilities in the organisation, more effective are the KM processes. Communication infrastructure supports knowledge flow within and between organizations to share insights and applications. The KM process consists of four sets of practices: knowledge acquisition and creation, organization and retention, dissemination, and utilization. Every practice has a number of activities. Every time an organisation poses a new challenge, the entire set of practices get repeated again. Effective KM has a positive impact on organisational performance. KM results in multiple benefits to the organisation. As per the primary survey, it was found that there are few organisations, which practice KM without the nomenclature of KM. Thus while they may call it as human resource management, Standard Operating Procedures manual, mentoring etc., the basic intent is to gain benefits from preserving the knowledge. There needs to be more effort to create awareness about the broad ambit, which KM covers so that the organisations can align their activities in a unified manner.

If the KM infrastructure and process capabilities are well developed, every effort put in the development of KM would give long term returns to the organisations in the form of innovation, competitiveness, growth of resources, financial returns, increased value for customers and improved process performance. Future research in this area can focus on how KM affects the organisational

performance and ways to capture it.

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